MEDICAL

AND

PHYSICAL RECORDER.

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PHYSIOLOGICAL RESEARCHES.

[Translated from the French of Xav. Bichat.]

General difference of the two lives, with respect to the mode of action of their respective organs.

HARMONY is to the functions of the organs, what symmetry is to their conformation; it supposes a perfect equality of force and action, as symmetry indicates an exact analogy in the external forms and internal structure. It is a consequence of symmetry; for two parts essentially alike in their structure, cannot differ in their mode of action. This simple reasoning would lead us then to this general doctrine, viz. that harmony is the character of the external functions, and that discordance, on the contrary, is the attribute of the organic functions; but it is necessary to go more into detail on this head.

§ I. *Of the harmony of action in animal life.*

We have seen that external life resulted from the successive action of the senses, nerves, brain and locomotory and vocal organs. Let us consider the harmony of action in each of these grand divisions.

The precision of our sensations appears to be so much the more perfect as there exists a more exact resemblance between the two impressions, of which each is the assemblage. We see badly, when one of the eyes, better constituted and stronger than the other, is more sharply affected, and transmits to the brain a stronger image. It is to avoid this confusion, that one eye is closed, when the action of the other is artificially encreased by means of a convex glass: this glass destroys the harmony of the two organs; we use but one eye that there may be no discordance. What a glass produces artificially, the *strabismus* offers an example of in a natural state. We squint, says Buffon, because we turn away the weakest eye from the object upon which the strongest is fixed, to avoid that confusion which would arise in the perception of two unequal images.

I know that many other causes concur to produce this affection, but the reality of this cannot be called in question. I know also that each eye may act separately in different animals; that two different images are transmitted at the same time by the two eyes of certain species; but this does not prove, that when these two organs unite their action upon the same object, the two impressions which they transmit to the brain should not be analogous. A single judgment is in effect the result; but how can this judgment be formed with accuracy, if the same body presents itself at the same time with a vivid and feeble colouring according as it is painted upon the one or the other retina?

What we have said of the eye will apply likewise to the ear. If in the two sensations which compose the hearing, the one is received by an organ stronger, or better developed, it will leave a clearer and more distinct impression; the brain, affected differently by each, will be the seat of only one imperfect perception. This is what constitutes the false ear. Why is one man painfully affected by a dissonance, which is not perceived by another? It is because with the one, the two perceptions of the same sound lose themselves in one; this is precise, rigorous, and distinguishes the smallest fault in a song, whilst with the other, the two ears offer different sensations, the perception is habitually confused, and cannot appreciate the fault in the harmony of sounds. It is for the same reason, that you see such a person always exact in the succession of measures in a dance, while the steps of such another on the contrary are constantly discordant to the musick of the orchestra.

Buffon has confined to the eye and ear, his considerations on the harmony of action; let us pursue the examination in animal life.

In the smell, as well as in the other senses, we must distinguish two impressions, the one *primitive*, which belongs to the organ, the other *consecutive*, which affects the sensorium; the latter may vary, while the former remains the same. Such an odour drives certain persons from a place, to which it attracts others; this is not because the affection of the pituitary gland is different, but because the mind attaches different sentiments to an identical impression.

But sometimes the impression created on the pituitary differs from what it really ought to be for the perfection of the sensation. Two dogs pursue the same game; the one never loses the trail, follows him in all his windings and turnings; the other follows also, but is often at fault, loses

the foot, as it is said, hesitates and seeks to refind it, runs on and again stops. The first of these dogs receives a strong impression from the odorous emanations, while they affect confusedly the organ of the second. Now, does not this confusion depend upon the inequality of action in the two nostrils, upon the superior organisation of the one, and the weakness of the other? The following observations appear to prove it.

In the coryza which affects but one nostril, if both remain open the smell is confused; close that of the affected side, it will become distinct. A polypus on one side, weakens the action of the correspondent pituitary, while that of the other remains unaffected: hence, as in the preceding case, the want of harmony between the two organs, and consequently a confusion in the perception of odours. Most of the affections of one nostril have similar results, and which may be momentarily corrected by the means I have pointed out; and why? because by rendering unoperative one of the pituitary glands, we put a stop to its discordant action with the other.

We may hence conclude that, since every accidental cause which destroys the harmony of functions of the organs, renders the perception of odours confused, it is probable that when this perception is naturally incorrect, there is in the nostrils a natural inequality of conformation, and consequently of strength.

We may say of the taste, what has been said of the smell: one side of the tongue is often affected with paralysis, or spasm. The median line sometimes divides the insensible portion from the other which still preserves its sensibility. Now, in this case, it is easy to conceive that the taste will be irregular and confused, because a correct perception cannot arise from two unequal sensations which have the same object. Who does not know that certain

persons find in certain substances a perfect insipidity, or at most an obscure savour, while others will find in the same substance a thousand subtile causes of painful or agreeable sensations?

The perfection of the touch, like that of the other senses, is essentially dependant on the uniformity of action of the two symmetrical halves of the body, of the two hands in particular. Let us suppose a blind man born with one hand regularly organised, whilst the other, deprived of the motion of the thumb and fingers forms a rugged, motionless surface; such a man would with difficulty acquire ideas of size, figure, direction, &c. because the same sensation would not spring from the successive application of the two hands upon the same body. Let them both touch a small sphere, for example; the one, embracing it precisely in all its diameters, would give the idea of roundness; the other which could come in contact with it at certain points only, would create an entirely different sensation. Suspended, as it were, between the two judgments, the blind man would with difficulty know which to form; he would even form a double judgment, corresponding to the two sensations created by the external form of the body. His ideas would be more correct, if he condemned one hand to inaction, as one who squints turns the weakest eye from the object, to avoid that confusion, the inevitable effect of a diversity of sensations. The hands then reciprocally assist each other, the one confirms the motions which the other gives us: hence the necessary uniformity of their conformation.

The hands are not the only agents of touch; the plaits of the fore-arm, of the axilla, the groin, the concavity of the foot, &c. may by embracing a body, furnish us with real, though less perfect, foundations for our judgments of external forms.

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We conclude from what has been said, that in the whole of the external sensitive system, harmony of action in the two symmetrical organs, or in the two analogous portions of the same organ, is an essential condition to the perfection of our sensations.

The external senses are the natural exciters of the brain, the functions of which in animal life constantly succeed theirs, and which would languish in constant inaction, did it not find in them the principle of its activity. Sensations create perception, memory, imagination, and hence the judgment. Now it is easy to prove that these different functions, commonly designated under the name of *internal senses*, follow in their exercise the same law with the external senses, and that, like these, they approximate so much the more nearly to perfection, as there is more harmony between the two symmetrical portions of the organ in which they are seated.

Let us suppose, for example, one hemisphere of the brain more strongly organised than the other, better developed at all points, and hence susceptible of being more vigorously affected; I say, that in that case, the perception will be confused; for the brain is to the mind what the senses are to the brain; it transmits to the mind the shock received from the senses, as these last convey to it the impressions made upon them by surrounding bodies. Now, if the defect of harmony in the external sensitive system disturbs the perception of the brain, how can it happen otherwise than that the mind should perceive confusedly, when the two hemispheres, unequal in point of power, do not combine in one, the double impression which they receive?

In memory, (the faculty of reproducing former sensations) and in imagination, (the faculty of creating new ones) each hemisphere appears to reproduce or to create

them. If both are not perfectly similar, the perfection of the mind which must unite them, will be incorrect and irregular. For there will be inequality in the two sensations, if it exists in the two hemispheres where they are seated.

Perception, memory, and imagination, are the ordinary bases of judgment. If the first are confused, how can the latter be distinct?

We have *supposed* an inequality of action in the two hemispheres to prove that want of precision in the intellectual functions must be the result; but what we have yet taken only as a supposition, becomes reality in a multitude of cases. What is more common than to see the numerous changes produced, in memory, perception, imagination and judgment, by the compression of one of the hemispheres, by blood, pus, a depressed bone, or an exostosis on the internal surface of the cranium, &c.!

Even after every sign of actual compression has disappeared, if, by the influence of that which it has experienced, one side of the brain remains enfeebled, will not these alterations be prolonged? will not various alterations be the sad consequences? Should both sides remain equally affected, the judgment would be weaker, but more correct. Hence we may explain the observation so often made, that a blow on one side of the head has re-established the intellectual functions that had been for a long time disturbed in consequence of a blow received on the opposite side.

I have endeavoured to prove that an inequality of action in the two hemispheres of the brain must produce a disturbance in the intellectual functions. I have pointed out several cases where this disturbance is the evident result of this inequality. We thus see the cause and effect; but where the first is only apparent, does not analogy point out the second? When the judgment is habitually incorrect, when all the ideas fail in precision, are we not led to believe

that there is a defect of harmony between the two sides of the brain? We see awry, if nature has not given an equality of strength to the two eyes. We perceive and we judge after the same manner, if the hemispheres are naturally discordant: the clearest wit, and the soundest judgment, suppose the most complete harmony in them. What varieties in the operations of the understanding! and do they not correspond to so many varieties in the respective powers of the two divisions of the brain? If we could *squint* with this organ as with the eyes, that is to say, receive external impressions but on one hemisphere, and employ but one side of the brain in forming our determinations and judgments, we should then be masters of the justness of our intellectual operations; but such a faculty does not exist.

Let us pursue the examination of the harmony of action in the system of animal life. To the functions of the brain, succeed locomotion and voice; the first appears, at the first glance, to be an exception to the general law of harmony of action. Consider, for instance, the two vertical divisions of the body; you will see the one constantly superior to the other in the extent, number, and faculty of its motions. This, 'tis known, is the right side which has commonly an advantage over the left. To comprehend the reason of this difference, let us distinguish every species of motion by its strength and agility. Strength depends upon the perfection of organization, the energy of nutrition, and the plenitude of life in each muscle; agility is the result of habit and frequent exercise.

Let us now remark that the discordance of the locomotory organs is observed not in the strength, but in the agility of motions. There is an equality of volume, number of fibres and nerves of the superior and inferior extremities; the difference of their vascular system is scarcely observa-

ble. It follows then that this discordance is not in nature; it is the manifest consequence of our social habits, which, by multiplying the motions of one side, increase their agility, without adding much to their strength.

Such are the wants of society, that it becomes a matter of necessity that a certain number of general motions should be executed in the same direction by all, in order to be mutually understood. It has been agreed that this direction should be from left to right. The letters which form the writing of most people are directed in this way. This circumstance creates the necessity of employing the right hand, which is better adapted than the left to the formation of these letters, as the latter would suit the opposite mode of writing infinitely better.

The direction of letters from left to right imposes the necessity of running over them with our eyes in the same manner. From the habit of reading thus, arises that of examining most objects after the same manner.

These general motions, agreed upon in society, and which if they were not executed by all after the same manner, would destroy the harmony of a thousand acts—these motions, I say, by the influence of habit, unavoidably lead us to employ, for our personal necessities, the members which they put in motion. Now, these members being those of the right, it follows that the members of that side are always in action, whether from the relative necessities of other individuals, or our own particular wants.

As the habit of acting perfects the action, we may conceive the cause of that excess of activity of the right members over the left. This excess is not primitive; custom produces it by insensible degrees.

This remarkable difference in the two symmetrical halves of the body, is not then, naturally, an exception to the

general law. This is so true, that the totality of motions executed with all our members, is so much the more precise, as there is less difference in the activity of the right and left muscles. Why do certain animals bound with such activity from rock to rock, where the slightest deviation would plunge them into an abyss—and run with such admirable precision over forms scarcely equal to the size of their limbs? Why is the walk of the heavier and more clumsy animals never accompanied with those false steps so common in man? It is because in the former, the difference in the locomotory organs of the two sides being scarce any thing, these organs are in constant harmony of action.

The man who is most adroit in the sum of his motions, is the least so in the particular motions of the right member: for, as I shall prove hereafter, the perfection of one part is never acquired at the expence of all the others. An infant who should be taught to make equal use of his four limbs, would have a precision in his general motions, which would be difficultly acquired in the particular motions of the right hand, as in writing, fencing, &c.

I believe, however, that some natural circumstances have had an influence on the choice of direction for those general motions which social habits require; such are the slight excess of diameter in the right subsclavian, that sensation of lassitude which accompanies digestion, and which, more sensible in the left side on account of the stomach, obliges us to employ the opposite side; that natural instinct also, which, in lively affections, leads us to place our hand upon the heart, to which the right is much more easily directed than the left. But these causes are almost nothing compared to the disproportion of motion in the two symmetrical divisions of the body, and for this reason it is correct to say that their discordance is an effect of social intercourse,

and that nature originally destined them to harmony of action.

The voice, together with locomotion, is the last act of animal life, in the natural order of its functions. Now, most physiologists (Haller in particular) have pointed out, as the cause of its defect of harmony, a discordance in the two symmetrical portions of the larynx, an inequality of power in the muscles which move the *arytenoides*, of action in the nerves which go to each side of this organ, and of reflection of sounds in the nostrils, and in the right and left sinuses. A false voice, doubtless, often depends upon the ear: when we hear falsely, we sing so also; but when the correctness of hearing coincides with the defect of precision in the sounds, the cause is certainly in the larynx.

The most harmonious voice then, is that which the two parts of the larynx produce in an equal degree, where the vibrations of one side, exactly similar in number, force and duration, to those of the opposite side, concur with them to produce the same sound; in the same manner, the most perfect song would be that produced by two voices exactly alike in their capacity, tone and inflections.

From the numerous considerations which I have presented, I should think that this general inference may be drawn, namely, that one of the essential principles of animal life, is the harmony of action in two analogous parts, or in the two sides of a simple part, which concur to the same end. The relation which exists between this harmony of action, the character of the functions, and the symmetry of form which is the attribute of the organs of animal life, may be easily seen, without being pointed out.

In speaking of the different derangements which result, in animal life, from a defect of harmony in the organs, I am aware that I have not attempted to assign but one iso-

lated cause of these derangements; I am nevertheless not ignorant that a thousand circumstances besides the discordance of the two hemispheres of the brain, may disorder the judgment, memory, &c. &c.

CASES,

Taken from the Marine Hospital Books;

By the Editor.

CASE IV. Dysentery.

E. L. aged about 30 years, was admitted March 14th, 1808, complaining of severe griping, with frequent discharges of bloody mucus, and all the symptoms of dysentery—had been taken three or four days before, and had used no remedies—ordered a cathartic of Oleum Ricini, and after its operation the following

℞. Mur: Hydr. Mit. ʒss.
Gum: Opii grs. iv.
Tartr: Antim: grs. ij. Syr: q. s. ft. Pilulæ xij—quarum quatuor capiat die pendente.

15th. The oil operated well—the dejections to-day have not been so frequent, nor the tenesmus so ditressing—Continue the pills with an intermission of every second day for the repetition of the oil, so long as the bloody evacuations shall continue.

This course was pursued to the daily advantage of the patient until the 26th, when he appeared to have entirely

recovered, and was at his own request discharged. On the 1st April he was readmitted, complaining of extreme debility and an inability to continue at his work; the griping and tenesmus had returned, but he had observed no blood in his discharges—he complained of excessive internal heat, languor and loss of appetite—was not conscious of any impropriety or excesses in his living—but had been hard at work for two days, while the weather was unusually warm for the season—

℞ Sulph: Sodæ ℥ jss.

Tart: Antim. grs. iij M. et div. in partes equales sex qu. unam capiat onni secunda hora, usquequo responderet alvus. If the pain in the bowels and tenesmus should continue after the full operation of the powders, let him take a grain of opium.

2nd. Feels very little alteration in the symptoms, the powders had produced only a slight operation, and the opium had not been given, pulse frequent, and the skin, more especially about the abdomen, very hot—Continue the powders with the addition of one drachm of Nitrate of Potash to the above formula.

3d. The powders appear to have produced an admirable effect; they operated freely *per ore et ano*, and created a comfortable moisture on the surface, which greatly relieved him from the sensation of heat internally——Let him continue to take four of the powders daily, with the addition of an opiate at night.

5th. Much better—has had no recurrence of the tenesmus, nor bloody discharges—complains less of heat, and appears to have regained a little appetite—Discontinue the evacuating powders, and let him take freely of Peruvian Bark and Colombo conjoined, with a nourishing diet of Barly, Sago, Arrow Root, Wine, &c. and repeat the opiate every night.

11th. Convalescent—has felt severe gripings occasionally, from which, however, he was generally relieved by the operation of a dose of Oleum Ricini.

15th. Still convalescent.

20th to 25th, he continued to mend—every dysenteric symptom appeared to have been overcome, but his strength returned slowly.

29th. This morning, his eyes are observed to have assumed a complete bilious hue, and his whole countenance an icterical aspect—complains of pain in the right hypochondrium, extending occasionally to the shoulders and clavicle of the same side: Upon examination the liver appeared to be considerably enlarged, and throughout the abdominal teguments there was a great degree of tension—his urine came away sparingly and high coloured, and he ha' had several watery dejections during the last night. Upon these manifest appearances of an inflammatory affection of the liver, the tonic medicines were laid aside, and the Mercury immediately exhibited in the following form:

℞. Mur: Hydrarg: Mit: ʒ i.

Nitr: Potass:————ʒ ij. M. et div. in chartas equales XXIV. un: ter in die sumend: si adegerint dejectiones, dosi singulæ, opii adde grani dimidium.

30th. Pain continues severe in the hypochondrium—Urine rather increased in quantity, but still hot and high coloured—It has been found necessary to add the opium to his medicine, which, however, has had little or no effect upon the intestinal discharges—appearance of the eyes and visage unchanged. Continuentur remedii et ungatur hypochondrium affectum hydrargyri unguento.

May 3d. His mouth begins to be affected by the mercury, and the pain about the hepatic region considerably abated—The diarrhœa continues, the matter of which va-

ries from green to yellow, and from froth to mucus, attended at times with excruciating pain in the abdomen, pulse weak and low, no appetite, cold and partial sweats at night, and extreme prostration of the vital powers. Under these circumstances, it appeared improper to continue the mercurial course, notwithstanding its evident beneficial operation on what was considered the seat of his disease—it was therefore laid aside, and my efforts were directed solely to sustain the almost exhausted strength of my patient, and this could be done by diet alone, for his stomach rejected every offer of the bark or wine—A few occasional doses of emollient cathartics were administered with a view to rid the stomach and intestines of their acrid contents, and thereby relieve the excessive griping which so frequently distressed him; but the relief was merely temporary—the pain recurred once or twice every twenty-four hours. By degrees, however, the pain in the hypochondrium left him, the size of the Liver was so far diminished as not to be easily felt, and for the space of two weeks, great hopes were entertained of his recovery.

On the 20th, he complained of the most acute pain in the Hypogastric region, which he could scarce endure to be touched; upon inspection a circumscribed redness was observable, having for its centre the edge of the rectus muscle of the right side in a direct line from the umbilicus, forming a circumference of about twelve inches; the diarrhœa was increased; and he complained also of a troublesome cough, and slight stricture across the breast.

From the glossy, smooth appearance of the inflammation, the hardness and tension of the skin, and the excessive soreness of the part, I had every reason for believing that pus was formed or forming in some part of the abdominal viscera, and as the inflammation was unattended with pyrexia, the only indication was to endeavour, by

every means, to promote the formation and rupture of the abscess externally: with this view warm fomentations, cataplasms, &c. were assiduously applied to the part affected. Opium was essential to his very existence, and was therefore given freely. The poultices were continued without producing any alleviation of pain for three days, when they were laid aside, and a Vesicatory applied over the whole extent of the inflamed surface: so little appearance was there of tumor in the part, and so inane were all the viscera, that the abdomen formed a complete basin externally with its surrounding walls. The blister did not draw very well; yet the patient experienced great relief from it, and the part was ordered to be dressed with cantharides ointment.

27th. It is remarkable, that from the blistering ointment, and three successive plaisters of the flies, no more than half an ounce of fluid was brought away: the patient however felt some abatement of pain; which perhaps was rather attributable to the anodyne effects of the opium than to the operation of the blisters.

30th. The cough has become more troublesome, as well as the pain in the breast more severe—the calls of nature very frequent, copious and colliquat attended with tenesmus—legs and feet œdematous. ections of mutton broth, &c. &c. as well to allay the i ion of the bowels as with a view to afford some nourishment to the system, had been repeatedly ordered, but the poor fellow complained of such a total inability to motion that he would not suffer them to be repeated more than twice.

In this wretched state of protracted sufferings he lingered till the 17th May, when, upon entering his ward, I found him, as I thought, breathing the last sighs of death. On the 18th, however, he was not only alive, but expressed himself much better; was free from pain, and had passed

a calm night of uninterrupted repose—he talked of his friends, and formed a hope that he would yet survive—Alas! this was the insidious glimmer of the expiring taper, which lasted but to light him to his grave! Early on the morning of the 20th he ceased to exist.

APPEARANCES ON DISSECTION.

Upon cutting through the integuments of the abdomen, and laying bare the oblique and recti muscles, a considerable quantity of serum was found effused between the adipose membrane and that part of the rectus muscle over which the external inflammation had appeared, the muscle itself was sound, and had no appearance of disease—When the peritoneum was pierced by the scalpel, a serous fluid issued through the opening, as from a fountain, to the quantity of a pint or more—the stomach was found in a healthy state—the duodenum, for about half its length, bore some slight marks of inflammation, and adhered to the omentum. No portion of the Liver bore any marks of disease—The spleen was somewhat indurated, and the rest of the viscera were found in a natural state! The Viscera of the Thorax were in a natural state; except that a very small portion of the pleura adhered to the right lobe of the lungs!

Where was the seat of his disease? Is it possible that the small quantity of serum found in the cavity of the abdomen, could have been the cause of his death? If the liver, as every symptom induced us to believe, had been diseased, could it so soon have recovered its natural and healthy appearance? Could the very slight apparent inflammation of so small a portion of the duodenum, have caused those severe and excruciating pains in the hypogastrium? or could inflammation of any of the viscera, have been unattended with pyrexia?

CASE V. Profuse Discharge of Blood by Stool.

W. F. aged between thirty and forty years, in a fit of intoxication, fell and hurt himself very much across the abdomen, just below the cartilago ensiformis—three or four days after this accident, he was admitted into the hospital, complaining of violent colic pains, shivering, loss of appetite, &c. A cathartic of Oleum Ricini was ordered, which operated well; but as the pains were not relieved, an Opium Pill was prescribed at night.

The next day the pains were in a great measure relieved, but the discharges were frequent, copious, and composed entirely of apparently coagulated blood—some degree of tenesmus attended these discharges, and sometimes a painful prolapsus ani succeeded; paroxisms of cold shivering were now frequent, and the clammy sweat, loss of appetite, and inability to voluntary motion, seemed to indicate an almost irrecoverable degree of debility—the quantity of blood voided in twelve hours, amounted to as many pints—In this situation the following prescription was ordered—

℞. Muri: Sodæ ʒ 1.
Nitr: Potass: ʒ iij.
Sulph: Alum: ʒ 1. M. div. in chartas octo qu. un. cap. omni hora.

Of these powders, either from their disagreeable taste, or the extreme irritability of his stomach, he could be prevailed on to take no more than the first one; and it was found necessary, in their stead, to resort to injections of strong brine; these were repeated four times in the course of that and the following day. On the 5th day of his admission, (the 9th from the accident) he had only five evacuations, and the quantity voided at each time was not more than one pint. The griping recurred at intervals with great severity, and he complained very much of the tenderness of the rectum upon the introduction of the pipe; the in-

jections were consequently omitted for this day, and an opiate only prescribed at night.

On the 6th the discharge of blood became as profuse as ever, and each evacuation was accompanied by an universal shivering and trembling of the body—the protruded portion of the rectum was extremely painful, and thence difficult to be reduced; not willing to risk the exciting inflammation in this intestine, nor to put the patient to the pain of enduring the introduction of the sipho, he was directed again to try the powders before prescribed: The first dose excited nausea and vomiting, which effects, however, ceased upon the repetition of the medicine.

On the 7th day, such had been the wonderful and sudden effects of the medicine, that during the whole day only one pint of blood was voided; soon after the third powder had been taken a slight diaphoresis came on, which continued for ten or twelve hours, the pulse became fuller and softer, and the patient complained no longer of those alternations of temperature which had been before so frequent. The powders were continued with the constant exhibition of an opiate at night until the 10th day, when the ruptured vessels appeared to be perfectly healed, and no more blood was poured out. The patient was excessively debilitated, had still little or no appetite, but remained free from pain or griping. It was now thought advisable to administer the Peruvian bark, which was continued for a fortnight, at the end of which time he was discharged cured.

CASE VI. Singular Affection of the Knee-Joint.

I. C. a lad aged about 18 or 20 years, was admitted July the 9th, complaining of acute pain and a slight swelling of the integuments of the knee—a very trifling degree of inflammation was perceptible. The patient was not conscious of having received any external injury on the joint,

and in other respects was perfectly well. A cathartic was ordered to be given, and an epispastic to be applied sufficiently large to cover the whole of the affected part. A fine blister was raised, which relieved the pain of the joint greatly, but did not diminish the swelling. The blister was kept open for three or four days, during which period the swelling was considerably increased, extending along the whole course of the thigh—the interior surface of which bore a smooth, shining appearance, as if a formation of pus had taken place underneath—The leg and foot were œdematous and distended to double their natural size. Cataplasms of bread and milk were now applied with the view of forwarding suppuration and bringing the abscess more immediately under the controul of the lancet: these were continued four days, with effects however, so different from the purpose intended, that at the end of this period the swelling was considerably diminished, had lost all appearances of suppuration, and instead of the hard unyielding surface which it before opposed to the touch, it was elastic, and a fluctuation, as in hydropical swellings, was evident upon pressure—Under these circumstances, the poultices were laid aside as no longer necessary, and mercurial frictions were substituted with the view of discussing the tumor. These were continued for one week. The tumor was considerably diminished, the pain much abated, and from the incipient ptyalism great hopes were entertained that the proposed intention would be accomplished. With all these appearances, however, the tumor broke about half an inch above the patella interiorly, and in less than twenty-four hours, discharged two and an half gallons of pure pus—the leg and thigh were reduced to their natural size, and nothing remained but to support the system under such an immense discharge by the free use of the Peruvian Bark.

AN EXPERIMENTAL ENQUIRY

INTO THE

NATURE AND PROPERTIES

OF

INDIGENOUS MEDICINAL PLANTS.

By the Editor.

[*Continued from page* 131.]

V. OROBANCHE—Virginiana.—*Caule ramoso, corollis quadridentatis—Lin.* What the vulgar appellation of this plant is, I have not been able to learn. It belongs to the Didynamia class and Angiospermia order of plants, and is found growing only under the shade of the Beach tree: where it rises to the height of 12 to 18 inches, is perennial, and the stems and flowers of a shining brownish yellow hue. For my knowledge of the Orobanche, as well as of several other plants which will be mentioned in the course of this enquiry, I must take this opportunity of expressing my obligation to the politeness and indefatigable researches of a young gentleman whom Flora seems to have admitted to her most secret recesses, and in whom we may one day hope to find a rich contributor to Botanical Science.

The use of the Orobanche, in my hands, has been confined to external applications of it to old sores and obstinate ulcers—For this purpose the plant, when fresh, may be bruised and applied to the ulcer, without other dressing, and renewed once daily—When too dry to be used in this way, the plant may be moistened with a little boiling wa-

ter, or reduced to a powder, and thus sprinkled over the ulcer. The Corollæ, when dry, by being rubbed between the fingers, yield a large quantity of yellowish farina resembling fine sand to the touch, which acts most powerfully as an escharotic. I have had ointment prepared with it in the following manner, which appeared to possess all the virtues of the recent plant.

A handfull of the recent plant.

Hog's Lard and Sweet Oil, of each 12 oz.

White Wax 4 oz. Cut the plant into small pieces, mix it with the other ingredients in a tin kettle, and boil it over a slow fire for three hours; then strain and set it by to cool.

This plant very richly deserves a place in our shops, more particularly in all public institutions for the indigent sick, where ulcers are so often to be met with, of an inveteracy to resist every means used to cure them in the common way—Its application produces a sensation similar to, but not so violent as, the alumen ustum.—One case which has been cured by this remedy, deserves to be recorded—The patient had been afflicted with an ulcer on his leg for four years—at the time of the first application of the Orobanche, this ulcer extended from the middle of the *Gastrocnemius externus* to the *maleolus internus*, entirely surrounding the leg, which, as well as the foot, was double its natural size; it was filled with fungous excrescences, poured out a dark bloody water so extremely offensive, that none of the attendants could be found hardy enough to approach his ward, and was, withal, so very painful, as to prevent his sleeping. He was ordered to wash the ulcer, as clean as possible, with soap, and cover its whole surface with the bruised Orobanche: for a few hours after its application he suffered great pain, but during the night, remained quite easy: The next morning, upon removing the dressing, it brought with it a crust nearly a quarter of an inch thick of fun-

gous flesh, upon which it seemed to have acted like the actual cautery. Similar results followed the next dressing; after the third, a healthy pus began to be formed, and the cure was so rapid that in less than two weeks a complete eschar was formed over the whole ulcer—the swelling of the leg and foot was reduced by a proper attention to medicine and diet. Its internal use is recommended in diarrhœas and dysenteries as an astringent.

VI. KALMIA—Latifolia.—*Foliis ovatis, corymbis terminalibus.—Lin.* This is a most beautiful evergreen shrub, called in some parts of the U. States Ivy, and in others Laurel—It is known generally in the state of Maryland under the first of these names. It has long been thought to possess, in an eminent degree, medical virtues; but its dreaded deleterious effects have prevented it from getting into general use—As all medicines, to a certain extent, are poisons, so also do we find among poisons some of our most valuable remedies—and a little caution is all that is requisite to ensure the safety of experimenting with the most deleterious plants. The operation of the Kalmia Latifolia appears to be confined, in a great measure, to the cutaneous surface—it has also, however, a primary and powerful effect on the stomach. One drachm of the expressed juice of the Laurel, excites the most violent vomiting; taken in small doses, it produces nausea and perspiration. Applied in the form of ointment, I have found it efficacious in the cure of herpes, tænia capitis and itch. The most troublesome, but in my opinion the best method of obtaining its virtues in the form of ointment, is to mix the fresh leaves bruised with hogslard, and suffer them to simmer over a slow fire until the lard has acquired the green colour of the leaves. I have used it in various forms and in various stages of Syphilis, without any perceptible benefit.

VII. SANGUINARIA—Canadensis—*Corolla octopetale,*

Cal. diphyllus, siliqua ovata, unilocularis.—Lin. Commonly called, puccoon root, red ink, or blood-wort. This is a small, low plant, a native of this country, and among the first plants that put forth their leaves in the spring. The root, when recent, has a shining red appearance, and its juice is not unfrequently used by children at school for the purpose of writing.

This plant has been long esteemed a valuable remedy in Jaundice, and other bilious diseases. It may be used either in the form of decoction or pills—the latter form is preferable, as the dose may be more easily managed. I have not found a decoction of the leaves, given to the extent of half a pint, to produce any deleterious effects—The powdered root, in doses of 30 grains, operates quickly and safely as an emetic—given in doses of 10 grains, night and morning, it will seldom fail to cure Jaundice more speedily than any remedy within my knowledge. In gonorrhæa I have not found it to possess any virtue.

VIII. PHYTOLACCA—Icosandra—*Floribus icosandris decagynis.—Lin.* This is an American plant, known most commonly under the name of Poke. I have heretofore spoken of its virtue in the cure of hemorrhoidal swellings, a property which has not been attributed to it by any writers on the Materia Medica, but which has been verified to me by numerous experiments since my short account of it in the Philadelphia Medical Museum. It has been for a long time celebrated for the removal of Rheumatic pains; and it will be perhaps considered surperfluous to add any further evidence of its powers. I shall therefore barely say, that my observations have led me to prefer the berries to the root in all cases. The latter has never succeeded under my management, in any instance; and unless very great caution is observed in proportioning the dose to the age and strength of the patient, dangerous and very alarming symptoms are

too apt to ensue. From a vinous tincture of the berries, no such inconvenience has ever occurred, and in chronic Rheumatism, it has proved a most valuable remedy. Of a saturated tincture, the dose for an adult is a wine-glass full, night and morning.

CASE OF TETANUS,

Successfully treated, by COSMO G. STEVENSON, *M. D. of Baltimore, in a Letter to the Editor.*

DEAR SIR,

The following is at your service, if it meet your approbation.

S. P. a stout, plethoric, black woman, aged about thirty-five years, in walking barefoot, chanced to tread upon a piece of glass, which wounded her foot near the first joint of the little toe. It bled copiously, and no attention was paid to it. It healed, as usual, in a few days after the accident. At the expiration of three weeks, she was suddenly seized with a spasm in the muscles of the lower jaw, accompanied with intolerable pain, particularly near the Coronoid and Condyloid processes. This, in spite of large quantities of opium, increased, and a rigidity of the jaw supervened to such an extent, that she could not masticate her food. Two grains of opium were given every two hours, without any alleviation of the symptoms. In this dreadful state I determined to try the following practice, which in some instances had been known to succeed. I made an incision about half an inch deep, and an inch and an half in length, immediately above the cicatrix in a transverse direction, and then poured strong spirits of turpentine into the wound. In a few minutes violent pain was created in the part, and in half an hour the spasm left the jaw; and in a few hours more the rigidity entirely vanished. The pain in the wound became

excessive, and continued so for four or five hours; but the trismus was completely removed, nor did it ever recur. Little or no suppuration ensued, the wound healing by the first intention, or adhesive inflammation.

In this case, two questions present themselves to the investigation of the practitioner and physiologist, viz. Why should the muscles of the lower jaw take on such violent morbid actions from so trivial an accident? and in what manner did the spirits of turpentine act in removing those alarming and excruciating symptoms? I shall not, at present, discuss those points, as I wish more experience in this mode of practice, before I can bring my mind to any conclusion.

Yours respectfully,

COSMO G. STEVENSON.

Baltimore, Oct, 18, 1808.

To the Editor of the Baltimore Medical and Physical Recorder.

Sir,

In looking over Duncan's Medical Commentaries, I met with the following case of Ascites; in tapping for which similar appearances took place to those mentioned by your correspondent, Dr. Crawford, in your first number. As from the concluding paragraph of his letter, this case must have escaped his notice, perhaps you will gratify more than myself by giving it a place in your next number.

Respectfully,

Your obt. servt.

A. B.

"*The history of a discharge of blood to a great extent, by Tapping. In a letter from a gentleman of the island of Antigua, to Mr. Samuel Askill, communicated to Dr. Duncan.*

"A man applied to us on the 1st January, on account of a pain in his stomach and bowels, with which he had been troubled for about three weeks before his application. An hardness was discovered on the right side, just below the cartilago ensiformis; which we imagined to be an abscess forming in that part. Proper medicines for this and his other complaint were ordered. Six days after his belly began to swell, and on the 14th it was so much distended with water, as we imagined, that tapping became necessary. I accordingly performed that operation, and, to our great astonishment we drew off instead of water, *eight pints of blood*

resembling that drawn by venesection. He underwent the operation without being in the least faint. After the blood stood two hours, the serum separated from the crassamentum. I tapped him three times, about sixteen days between each; but the fluid drawn in these last was clear and like water. He died March 12th, and upon dissection, the appearances were as follow:

The thorax was full of water; the liver was very full of hard schirrous tumours, one in particular, larger than the rest, weighed ten ounces, when dissected from the liver; the intestines were quite destitute of fat, and the omentum destroyed; the peritoneum was much thickened, and the stomach exceedingly small. The spleen, kidney, and gall-bladder in their natural state. From the appearances I think there can be no doubt, that this man's disorder originated from a disease of the liver. Upon a strict and careful examination of the body when opened, there was not the least appearance of any vessel ruptured or wounded; neither could any have been wounded while the operation for the *paracentesis* was performing.

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Dr. Crawford on the Seats and Causes of Disease.

(In Continuation from Page 92.)

§ 49. The amphibious animals are less numerous than any of those previously considered, but they are all furnished with the means of offence and defence, and have severally a task assigned to them, in which they co-operate to the general good.

Those of the crustaceous kind are some of them very large, and prey upon the lesser reptiles, to many of whom their eggs furnish abundant support. Not a few feed extensively on fish. Thus they restrain their multiplication and are themselves restrained by numerous enemies, particularly in their egg state, and when they are casting off their coverings, an event common to great numbers, and they are then not only in a defenceless state, but afford delicious food to their numerous destined devourers, amongst whom the human race is not the least conspicuous.

The Rana tribe is very extensive. They feed upon insects and many of them on the smaller quadrupeds, as mice and rats. They are of great importance in lessening the croud of mice called Lemming, which infest the mountains of Lapland and Norway. These animals descend from their retreat at the commencement of warm weather, to the low land which they inundate in such a manner as to induce the country-people there to believe they fall from Heaven

with the rain. The species of Frogs in that vicinity give powerful aid in freeing the other inhabitants of the earth from so great an annoyance. The Lizard and Serpent families extensively coerce the numerous objects of their support, and are equally subserveint to others whose connection they require.

§ 50. Birds numerous in species and genera, are actively employed in preserving the general balance. They are graminivorous, carnivorous, and omnivorous; thus they diminish the excess of every production in nature. They serve also to disseminate the seeds of vegetables, and to supply parts with benefits of which without their aid they must be deprived. They often convey seeds they have swallowed, unaltered, to places where they have not been suspected, and have surprised the husbandmen with productions very different from what they intended; occasioning them great difficulty in accounting for the phenomenon. Where Oats have been sown, to their astonishment, Rye has been produced. The advantages they afford to the inhabitants of warm climates are eminently important. Indeed were it not for their assiduity in destroying the multitudes of insects, and offensive animals which so much abound there, and in exonerating the earth of dead carcases which must be continually presenting, these countries would be uninhabitable. In every part of the globe, they are active agents in removing superfluity, whilst their excess is equally checked, either by each other, or by some other species of animals, to whom they amply furnish the means of support or of perpetuity.

§ 51. Quadrupeds are much less numerous, but have generally more power, which they efficiently exert in obviating an undue proportion of the objects of their search.—

like the birds, they severally, according to their different characters, derive sustenance from almost every production in nature. There is one trait in the dispositions of those with which we are most familiar, that extorts the admiration of every reflecting observer. Each genus of the graminivorous classes has its particular food appointed to it, thus providing against confusion, lessening the excitement to contention, and affording to all the requisite support, and also the indispensable restraint. Thus the horse and horned cattle leave the Hemlock to the Goats and to the Sheep; these, the Wolfsbane to the Horse. Thus one animal will fatten on what proves destructive to another; hence there are no vegetables that are poisonous excepting respectively, and all animals are endued with such organs of sense as lead them to select one kind and reject another. The knowledge of animals in chusing and refusing is so well known to the œconomical Hollanders, that on a defined space of ground they will amply maintain eight horned cattle for a certain period; and these having exhausted the food which to them is appropriate, two horses will find on the same patch, a full sufficiency for some days. When nothing has been left suitable to the horses, eight sheep will procure the necessary support, for a definite time. The carnivorous and even the omnivorous tribes give each a preference to particular objects, and severally prefer and reject what is set within their reach. Of this the human race affords a conspicuous example, and the fact is indeed so well known as not to require any illustration. This law governs all without exception, a law indeed, as necessary as their difference of character, and eminently conducive to that harmony without which existence must have long since terminated. War, we have seen, is common to all, but war is, by the Supreme Director, conducted with such order as never to permit the desolating evil, confusion, to frustrate his great designs.

Hitherto we have given our attention to obvious war where in animal life, the assailants and the assailed are generally known to each other. A farther detail of contests would be incompatible with the limited nature of this work. Enough it is presumed has been adduced to establish the principle that *whatever has been created, possesses and exercises the powers of multiplication beyond the means of support, and that the exigencies of which this want of support must be the consequence, have been obviated by constituting one or more species as food for each other.* But the proofs afforded by the objects of sense are not sufficient to explain the œconomy of nature, to the extent employed in effecting the destruction of such as are superfluous, because decay and death often occur both in the vegetable and animal kingdoms, which escape even the penetrating eye of the most scrutinising genius. This has been long eagerly sought for, because it is deeply interesting to the human species, a species alone capable of the investigation, and a species eminently exposed to the operation of this hitherto undiscovered cause. It is plain that the course by which this process is to be traced has not been yet adopted, success must have otherwise been long since accomplished, considering the brilliancy of talents conspicuous in a great number of those who have engaged in the pursuit. I have long felt a conviction that the error has been in omitting to compare the whole of the circumstances accompanying the event, where the cause was fully in our view, with those which presented when the cause was completely hidden; in short the neglect of carefully proceeding from the known to the unknown, and in cautiously guarding against self delusion, or the adoption of conclusions which the premises will not in every particular fully support.

§ 53. This subject has occupied my attention for many years—I have given a sketch of it in a periodical paper published in this city in the course of the last year, called the Observer, and have thus far continued the subject in a way rather more scientifick than was suitable to that work. In the prosecution of my researches, I have endeavoured to profit by the injunction of the great Verulam, who, as translated by Shaw, urges the following excellent argument.

"He who would come duly prepared and fitted to the business of interpretation, must neither be a follower of novelty, custom nor antiquity; nor indulge himself in a liberty of contradicting. He must neither be hasty in affirming, nor loose and sceptical in doubting; but raise up particulars to the places assigned them by their degree of evidence and proof. His hope must encourage him to labour, and not to rest; he must not judge of things by their uncommon nature, their difficulty, nor their high character; but by their just weight and use."

§ 54. The true interpretation of nature is certainly of the highest importance to those who undertake the management of diseases. Has any rational progress been yet made in this interpretation? Has any light been yet shed on the causes of diseases such as can give any rational satisfaction to the enquiring mind? We are in truth as much in the dark respecting them as during the age of Hippocrates, and this must be attributed to the erroneous course that has been pursued, and not either to the impracticability of the subject, or the incapacity of those by whom it has been investigated. Let us then profit by the reprehension of Demosthenes to the Athenians, as quoted by the above cited great author; "what with regard to times past, is the worst; should "for the time to come, be esteemed the best. For "if you had performed your duty to the full, and yet your

"affairs had gone backwards, there would have been no "hopes of their amendment: but as the bad posture of your "affairs proceeds, not from necessity, but from your own "errors; there is room to hope that when those errors are "forsaken, or corrected, a great change for the better may "ensue." The fact is we are in no want of materials: abundance is supplied, if we could be prevailed upon to make a proper use of our present ample stores.

§ 55. We have been hitherto suggesting a use of the materials we possess by succinctly shewing, that throughout the whole of sublunary existence, the power of increase was given without measure, and that the extinction to which this would inevitably lead, has been obviated by the whole of the animal world deriving their support from the vegetable kingdom, and from each other. But what has been hitherto done, as remarked in 53, more particularly regards what comes within the reach of our senses, but leaves a large chasm respecting those causes of destruction which are placed beyond the sphere of their capacity. There are concealed enemies referred to in Sect. 28 of the 2d number, and the design of this concealment is there explained to be a provision against the misery which must ensue from an open disclosure of scenes that are terrible even in idea. This has been the chief obstacle to the occupation of the mind in such a research; but we must resist such childish apprehensions, and boldly pursue the path which leads to truth, well assured that the discovery of it will amply compensate our labours. The truth is in every instance, so valuable, that timidity in the pursuit of it, should be nobly contemned, and the mind should boldly avail itself of every help, regardless of any danger that may attend the attempt.

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sist of the lowest order of beings, it is to these therefore we must direct our attention and in their œconomy we may hope to ascertain the clue which may lead us into this hitherto unexplored labyrinth. Insects are this order, and a short review of their habitation, their food, and their uses, more particularly than has been noticed in the preceding sections, may prepare the mind for a clearer perception of what we have in view. The manner in which we may be affected by them, will be thus better understood than by commencing with what is known of their influence on our own species.

§ 57. The inhabitants of the earth and waters, of a size that are fully within the sphere of our senses, occupy a considerable space, and their several characters are readily ascertained. These comprehend the various classes of Quadrupeds, Fishes and Birds, already superficially noticed.—The Insects, although descending to an almost inconceivable minuteness of form, by their immense number, possess a much larger proportion of the terraqueous Globe besides appropriating to the use every element by which it is surrounded, or of which it is composed. We may safely assert that as every part of created matter is capable of supporting life, so there is no part of it that is not occasionally resorted to by animal beings. These appear to be the great instruments in the hands of divine power for regulating the process of vitality and for curbing the licentiousness of procreation. They present to us a pleasing view of that protection which Providence affords to all its creatures—of the means it employs for perpetuating them, and of that great arrangement by which one set of living creatures subsists by devouring another, and by which life is secured to every species without a pause.

§ 58. Aristotle has asserted, and numeroussubsequent observers have clearly shewn, that all the larger animals, without any exception, are the habitation of peculiar insects, and indeed it is unquestionable, that as in vegetables, each part has either permanent or occasional visitors to which it finds food and a domicilium, so it happens with respect to animals. As an animal often feeds upon a variety of plants, so it furnishes a residence and nourishment for a variety of insects, in which it again resembles vegetables, as it is well known the Oak, for example, is the resort of at least twenty different species, all of whom find in it an ample provision for their wants. The vegetable kingdom is the field where the œconomy of insects is more within our reach, and has given opportunity for pursuing them in their several changes and conditions to a great extent.

§ 59. A class of beings, taken collectively, exceeding in magnitude all the other inhabitants of the earth, must have been designed for valuable purposes, and to attain any competent knowledge of these purposes must be well worthy the utmost efforts of human investigation. Men of the finest talents have devoted themselves to this fascinating study; they have made great advances; but much, very much still remains to be done to bring it to that state of perfection of which it is capable. During the early and greater part of the last century, it was pursued with avidity. The wars that intervened have, to the present day, been a dreadful clogg upon science, and amongst the rest, this has had no other advocates than those who have made compilations of what was previously done. The time we may hope is approaching when a brighter Sun will arise, and invigorate, with its rays, all the latent powers of the mind to an extent, hitherto, never experienced. Entomology will then claim that share of attention which its intrinsick value so highly me-

rits. Hitherto entomological enquiries have been pursued rather with a view to amusement than to real usefulness.—The anatomy of insects, has been more regarded than their manners and general œconomy. Curiosity has prompted to labour more than benefit, and it must be confessed that a gratification of this passion has a greater number of advocates, than the disclosure of truth, and the solid improvement of the understanding, an evil which has been long felt, and which must in time, be remedied. When the œconomy of the animal kingdom comes to be perseveringly traced, a comparison of the similarity in manners and views that obtain amongst the several species might be made highly interesting, and eminently instructive. This cannot escape the attention of those who are animated with a desire to develope the wonders with which this part of creation is replete.

§ 60. We shall now take a transient view of the enemies which are concealed from those they attack, but which are placed within the reach of our investigations, and refer from what we are able to discover in the œconomy of one class of animals, to what occurs in others, and particularly to our own, where the process is not obvious to our sense: but where the effects are strikingly similar it cannot assuredly be irrational, to conclude that the causes are equally similar. In the prosecution of this plan I shall shortly notice what is most curious in the habit of this order of beings, which often descends to a degree of minuteness that would astonish superficial observers. I shall chiefly take for my guide, Turton's edition of Linnæus, although I shall not omit the account given by other authors, where farther detail is necessary to the elucidation of the subject. I shall take a view of the whole according to the Linnæan orders, and shall commence with the first or coleopterous order, the wings of which

are covered with scales, or rather a shell-like substance, and includes all those of the Beetle genus.—I shall then advert to a few instances of such of this class as have been discovered in the human body, and thus I shall proceed through the several orders.

The larvæ of the Coleopterous or Beetle class live mostly under ground, and feed chiefly on the roots of plants, thus at once destroying vegetation. The Meloonthus or Cock-chafer, in this exceeds all the others.—Its grub remains in the earth three years, and devours the roots of corn and other vegetables, sometimes laying waste large tracts of country. The grub of the Horticola performs this office, often unmercifully to the roots of our cabbages.

The larvæ of the Dermestes or Leather-eaters are perhaps the greatest nuisances to Domestic life, and to the comforts contrived by art, of all the insect tribe. They are many of them so minute as not to equal half a line, and are probably, in great numbers much smaller. They are potent enemies to every kind of peltry, all preparations of specimens of natural history, and especially of books, sparing neither cover nor paper; the spots discoverable on the leaves of old books are probably their work, and it is not unworthy of notice that these spots very much resemble the spots and blemishes on the surface of old people termed prurigo mitis, and prurigo senilis. If they are even superficially compared, the similitude will appear very impressive. There could be nothing extravagant in alledging that they were derived from a cause of a like nature. There are many of the dermestes family that exhibit the same colour. It is well known that heat speedily gives motion to those that are visible, and it is also known that the heat of the bed greatly increases the pruritus in the disease to which we have referred. If this is hypothetical, it is certainly much better supported than any

other theory by which attempts have been made to otherwise account for these affections; that they are well worthy of farther investigation will appear from the following case, obligingly procured for me by Wm. Winder Esqr. of this city. It is contained in a letter addressed to that gentleman. A similar communication was made to Dr. Coxe in the month of November, 1805, which was published by that gentleman in his Museum, No. 3 of Vol 2. As the Doctor's purpose in communicating it to the public, and his reasoning on the event vary from the views with which I am occupied, I shall here adduce Dr. Stanford's letter to Mr. Winder of a subsequent date, and afterwards make such remarks as may serve to shew the relevance of the phenomena to the object at wich I aim.

"*Wicomico River lower Ferry, 29th March,* 1806.

"SIR,

"I have delayed writing to you until now, waiting "for an oportunity to procure some of the Insects which you "speak of, as I am willing to do every thing in my power "to the advancement of Dr. Crawford's work, of which you "make mention, although unacquainted with that gentle- "man. I have this day given an emetic to the patient, but "failed in procuring them as I expected. But for your sa- "tisfaction and at Dr. Crawford's request, I will give you a "statement of the case. In the latter end of september last, "I was called upon to visit Mrs. Polly Robertson; she in- "formed me that she had not been well for several years; at "that time she complained particularly of slight chills, a sick "stomach, with vomiting, high fever and pain in the head, "and frequently in the stomach; and that she had often vo- "mited a number of small round worms, which I supposed "to be what is called the true stomach worms. I advised "an emetic, and afterwards a mercurial cathartic, and then

"the bark. Upon my second visit was informed that the "emetic had operated well, and that she had vomited a "number of black bugs and worms, which urged me to a "strict enquiry of the patient and her attendants, by whom I "was informed that she was in the habit of vomiting bugs, "in likeness to what is called Black-bess for eighteen months "past, only smaller, also worms of different descriptions, "some of which had legs, and were striped crosswise, others "were white with black heads—she also informed me that she "had for some years an amenorrhœa. As her constitution "appeared to be pretty strong, I was induced to try the ef-"fects of mercury, which produced salivation, which was "kept up for three weeks, at which time she became so weak "that it was necessary to discontinue the use of the metal, "and strengthening medicines were given.—She slowly "mended, but nothing proved efficacious in preventing the "recurrence of the sickness in the morning. After some "time, I repeated the emetic, when I obtained a bug, a "black headed worm and some flies, some in likeness to a "gnat, others like unto a flying ant. She at length appears "to be better, and has not taken any medicines for several "weeks, although she still occasionally vomits up some of "these insects. She can tell pretty nearly when she will "vomit any of them, by a previous sense of burning in the "stomach.—I enclose to you, for the use of Dr. Crawford, "one of the bugs, and several certificates, and if the Doctor "wishes for any other information on the subject, I will at "his request, afford him every particular that may be in my "power."

I am &c.

(Signed) CLEMENT STANFORD.

I shall adduce only one of several certificates that accompanied this letter, as being very particular in describing what happened.

"I was called upon by Dr. C. Stanford some time in "November last, to see Mrs. Polly Robertson, a lady of "about twenty-eight, or thirty years of age, who had "for some time past been under his direction, and certify "that I saw Mrs. Robertson discharge from the stomach, a "number of small insects, among which were black bugs, "in likeness to what is called *Bess*, often found in decay-"ed wood, but much smaller in size, and resembling those "seen in bacon. Some white worms with a black sharp "head, and legs, and would take hold on a straw, suffici-"ently strong to be raised from the ground: flies, in size "and likeness to gnats, that would fly on extricating their "wings from the saliva; others, in size and likeness to fly-"ing-ants, which also flew."

(Signed) GEO: D. AITKINSON.

When the above communication is attentively considered, it may lead to reflections very different from those with which men have been occupied, who have hitherto prosecuted the science of pathology. I shall not in this place, enlarge upon its application to the theory I am endeavouring to establish. I shall hereafter produce numerous proofs by which it is sustained, and then offer such reasons, as will, I am firmly persuaded, confirm their relevance to the object for which they are adduced, and open to the mind, more satisfactory views respecting a branch of the Medical art, hitherto involved in inexplicable obscurity, whilst there is none that requires a more clear elucidation.

The specimen sent to me by Dr. Stanford appears, as far as can be judged, from its present dried state, to be a Dermestes.—The character of which in Turton's Linnæus is as

follows:—"Dermestes. Antennæ clavate, the club perfo-
"liate; three of the joints thicker: Thorax convex, slight-
"ly margined: head inflected, and hid under the thorax.
"Leather Eater."

"The Larvæ, or Grubs, of this tribe, devour dead bo-
"dies, skins, and almost any animal substance, and are ex-
"ceedingly troublesome to books and furniture."

The specimen I have is oblong, smooth and black, and the head is hid under the thorax, which in so far agrees with the family *Vulpinus*. The sides of the Thorax are said to be cinereous, downy, and beneath whitish. The length of time the present sample has been kept, renders these appearances now invisible to the unarmed eye. The description given of the worms is not such as to make it easy to refer them to the particular tribes of flies to which they belong.—They were evidently of various kinds. The larvæ of the Dermestes was doubtless amongst them. The mode in which they obtained admission into Mrs. Robertson's stomach, will be considered in the sequel. Their being there, with the symptoms that preceded their ejection, is our chief concern. I beg leave here to return my warmest thanks to Dr. Stanford for his kind attention to the letter of my highly respected friend Mr. Winder, and shall esteem it a great addition to the favour if he will have the goodness to furnish me with any farther observation with which the case in question, or any other case of a similar nature may have furnished him.—I farther take this occasion to entreat all those who may have an opportunity of seeing this work, and who may have directed their attention to this important object, to lend me their assistance towards bringing it to perfection. I have only to request most particularly that great care may be taken to guard against deception, and to adduce nothing as fact that does not admit of demonstration. Specimens will be likewise highly acceptable, and of very great value.

§ 61. The Lucani tribe of beetles feed upon the liquor which exudes from the oaks, which they suck with their tongues. The females deposit their eggs in the trunks of decayed trees, such as the Oak and the Ash. Their larvæ lodge *under the bark*, and in the hollow of old trees. Redi in his ingenious work on the various insects which he found in living bodies, instances worms he found under the skin of the Lion, the Marten, and other animals. Butchers frequently find them thus situated, very often in all their objects of slaughter, particularly the swine. May not these have been derived from eggs deposited on the surface, the young, when developed, having penetrated the integuments, and there found their proper dwelling and nourishment. The whole of the Sylpha families live upon, and are generated in carrion, which they voraciously devour, and thus essentially contribute to remove matter which must be offensive and injurious to every living creature if suffered to putrify.

§ 62. The Curculio family is very numerous, some of them so small as to be seen with difficulty through the most powerful microscope; many may be too minute for its utmost extent. They deposit their eggs in the seeds of plants, particularly those employed for domestic purposes. The naturalists alledge that their larvæ, when very young, find their way into the grain, but they do not tell us where the eggs have been deposited; at least many authors I have consulted are silent on this head, and analogy would lead to a conclusion, that the place wherein they are fed, acquire their full growth, and are afterwards cloathed, (to which use they employ the husks of the grain they have devoured,) should be also the place of their birth—their very diminutive size makes it difficult to ascertain their manner of proceeding in this respect. Their ravages are often attended with serious consequences to the farmers. Is it impossible that some such insect should find it's way to the embryo of the larger animals,

even attack the fœtus, and occasion the abortions which so often unaccountably happen? This subject shall hereafter be farther considered. The larvæ of the Cerambyx or Capricorn beetle, are found in the inner part of trees, which they are said to have perforated, and that they undergo their metamorphose in the opening they have formed, and when in a perfect state, escape by the passage which they formed on entering. This is liable to the same objection, and still more strongly, urged against the supposed process of the progeny of the Curculio. Is it consonant with probability that these larvæ when in their infancy, should be able to pierce the hard substance of trees, and form for themselves such a domicilium? This must be the work of the perfect insect, of which we shall hereafter adduce numerous instances.—Observations have not yet actually disclosed the manner in which the work is done; and whilst we are left to conjecture, we may more justifiably adopt that which is authorised by example, than hazard what is only supported by our seeing the form of the entrance, without having any evidence of the manner in which it was made. In other insects we have ocular demonstration of the process pursued in accomplishing such apertures, and such must ever be our safest guide, where it is concealed. There are several others of this order, that manifest a similar œconomy to that of the Curculio, and there is a great number, the nature of whose larvæ have not been yet discovered, possibly because they are placed in animals in a manner yet unattained by human research.

AN ACCOUNT OF THE

SANICULA,

As communicated to the Editor by Dr. J. C.

DEAR SIR,

In your 2d number, p. 126, you have made a valuable communication on the benefits derivable from our indigenous plants, and have given several happy instances of their utility. Circumstanced as this country is at present, when the jealousy of the great belligerent powers of Europe operates so strongly against the peaceful intercourse of neutrals with any of them, it becomes necessary for us to profit by all our own resources, and to search out substitutes at home for the more important articles that we have had hitherto brought from abroad.

It is a blessing never to be enough acknowledged, that the means of restoring health are always as near as those which are necessary for the support of life. Were we sufficiently to investigate the treasures at all times within our reach, we should probably find, that every acre of our ground capable of producing food, gives maintenance to what is requisite for remedying the incapacity to use it, in so far as depends upon the removal of diseases, and is consistent with the terms on which we hold our existence.

There is a strong propensity in mankind to appreciate every thing in proportion to the distance from which it has been conveyed, and the difficulty with which it has been obtained. This is certainly useful, because it gives a spur to industry,

and occasion for supplies to be furnished to each country severally, according to their abundance or scarcity; thus contributing to their mutual accommodation. But it has not escaped the notice of observers, both ancient and modern, that this propensity is often carried to an injurious excess, for we frequently tread under our feet, and wholly disregard, what would be more suitable to our purpose than what could be procured in any other country.

The avidity with which botany has been cultivated in the last century, has fully established the fruitfulness of every soil in remedies for the diseases that occur in it, and shewn the great usefulness of numerous domestic productions. Many of these were held in great estimation before the art of navigation had procured for countries removed to a great distance, a ready access to each other; but which, since that period, have been supplanted by foreign articles.—— The Botanists have again brought not a few of these into use, and with the increased attention to horticulture, many valuable exotics have been exported and familiarised to our climate. With respect to indigenous plants, the labourers in this country, employed in their investigation, have been numerous. Dr. Barton has laudably prosecuted the subject with assiduity and much success, and our medical journals abound with communications on our native productions which are highly important to the healing art.

The advantages of Botanical pursuits have been thus multiplied in not only making us acquainted with the nature and properties of foreign productions, but in directing our attention to our native treasures. This last has been peculiarly a benefit conferred upon the medical practitioners, for too many of them have been accustomed to confine their means of relief to the routine of the Druggist's store, despising the wealth with which our Forests and Meadows abound as a-

lone meriting the attention of old women and charlatans.—Having so frequently observed the prevalence of this impression, I have been led to suspect that the credit given to the ancient Physicians, for the discovery of medicine, was erroneous. I cannot believe that Hellebore was unknown as a reme- before the time of Melampus. The Human in common with every race of animals, must have been led to the means of cure, as to those of nourishment, nor could it have been more necessary to them in the former than in the latter instance to resort to other animals for information. I cannot be disposed to believe, that Melampus derived his knowledge of so active a medicine as that which has been often distinguished by his name, [for Hellebore has been called after him *Melampodium*,] from his noticing the use it was of to Goats. I have no doubt of a similar result being traceable to all the like origin of medicines, although this is not a fit occasion for the discussion.

Medical men, in their choice of remedies, when a particular one has succeeded with them, have too frequently announced it to the world with overstrained eulogiums, brought it into general use, and experience not justifying the high expectation, it has been as hastily abandoned. This is a great error and has often exposed the profession to much odium, and given occasion for attributing to the influence of fashion as much as in the triming of our cloathes. The Sanicula, of which you have, amongst others given us an interesting account, affords a striking example of the various fortunes to which remedies are liable. In the old authors, of which we have a detail in the Materia Medica of Alston, it is praised as highly efficacious, especially in healing wounds, and was even extolled as a certain cure for Hernia in young people.—Murray, in his Apparatus Medicaminum relates what his predecessors had said of it, but remarks, that in his time, it had fallen into disrepute. Our late Dispensatories do

not even mention it. Here then we see abundance of cause not to overcharge the character of any remedy which has proved to us advantageous, and thus by guarding against elevating the hopes too much neglect may be obviated and the merited degree of usefulness secured.— A panacea does not exist in nature; remedies for evils abound, but there are none capable of wholly extinguishing them, either as they respect disease or any other relation of life: Death is a debt we all must pay, to which disease offers the largest tribute.

The Sanicula, to which, at my recommendation you have given a fair trial, has proved useful, and in so far I rejoice in having had any share in bringing it again into notice. I should have long since communicated to the world the knowledge I have acquired of its virtues, had I not been restrained by its failure in numerous instances, and my deeming the proofs I had to adduce, although very striking, insufficient encouragement to its general adoption. A relation of the manner in which it came to my knowledge may not be useless. As I have long been persuaded that an acquaintance with remedies for diseases, at least as far as the vegetable kingdom is concerned, was not derived from those who were eminent for their cultivation of the Sciences, and that the human race have been led to the use of them by the same hand that directed to the proper articles of food, as above remarked, I have at all times given much attention to those who had been engaged in the application of rural productions.

In the beginning of August 1803 I was at the house of the late Major Stoddard, on the banks of Harris's Creek which bounds that part of our city called Fell's Point on the N. E. side. In conversing with him on the medical uses of various plants, a subject which had occupied much of his

thoughts, he mentioned that a plant grew on the opposite side of the creek, which was held by the Indians to be a specific for the venereal disease. I requested he would cross over with, and shew me the plant, which he obligingly did. I was unacquainted with its botanical character, but brought a parcel of it with me to town.

I had then a patient who was labouring under what might be considered as the chronic state of the lues venerea, a very worthy woman who had been injured by a profligate husband. I first saw her in consultation, on the 28th April of that year, and the following is the entry I afterwards made in my Diary—"She has a bubo in the inguen which has been long open, and has a serpiginous appearance.—She has likewise an exostosis on the middle part of the os pectoris, attended with a distressing sense of burning.—She has a constant fever, accompanied with excessive pain in the head, more especially at night." I continued my attendance from that time to the month of August. The bubo was healed, but the pain in her breast still continued and she had numerous brown maculæ on different parts of the surface, many papulæ containing an ichorous matter, with an inflamed base and very painful. On the 12th August she continued to suffer severely from the painful sense of burning in the breast and the eruptions. I prepared the herb, by cutting it into small portions, and putting about four ounces of it into a Celtzer-Water-Jug, which I filled with cold water. After standing twelve hours I desired her to drink a half-pint tumbler of the clear infusion frequently during the day. She continued the use of it until the end of September, but from the third day she sensibly improved, and in fourteen every morbid symptom disappeared, without having had any perceptible effect produced on the primæ viæ or the surface. The sense of burning in, and the tumor of

the os pectoris gradually lessened. The eruptions of every kind faded in colour and were finally removed. She daily increased in strength; her appetite improved—she became more fleshy, and by the end of September she was restored to perfect health, as far as a constitution much impaired was now rendered practicable. Neither the affection of her breast, nor that of the surface have recurred, and she has been since twice a mother, the children having, when born, all the appearance of freedom from any kind of disease.

The marked success in this deplorable case filled me with hope that I had made a most valuable acquisition, and I determined to prosecute the exhibition of it with unabating attention.

I was called to a lady in consultation with Dr. Alexander on the 23d September, and the following is the first entry I made of the case—"Mrs. W. has been for a long time in a delicate state of health. She has voided some worms; has a short cough with pain in the breast; the pulse is quick and small, and she is much emaciated." We employed the decoctum spigelii and such other febrifuge and pectoral remedies as the case indicated.

"26th.—Her cough is very distressing, which is much increased when lying on the left side.—The pulse is small and tense. On duly considering the case, and having learned that she had formerly suffered much from intermittents, we coucluded that the liver must be implicated, especially as her chief uneasiness was in the upper region of that organ. The circumstance of the cough being irritated when she sought repose on the left side still more justified the opinion that the liver adhered to the peritoneum and intercostal muscles; because on turning to the left side, the weight of the organ being suspended by the adhesion, put the parts onthe stretch, and thus necessarily excited irritation. Repeated dissections in similar cases, and where pthisis

pulmonalis had been suspected, had satisfied my mind that such adhesion must exist, when the cough was irritated by inclining from the right side, of which I have given an instance in Sect: 18, P. 48 of your second number. In the adoption of this conclusion, we resolved to make small venesections, to be repeated as circumstances might authorise, and to give a combination of Calomel, Camphor, Antimony and opium. This plan, and every other which the state of the disease suggested, proved to be unavailing.—The symptoms became daily more aggravated. She could not bear the depletions contemplated. Her cough was dreadful, and the pain excited by it exquisite. She had a morning and evening paroxysm of fever, and was reduced to the lowest state of debility. We gave her, with other medicines, the digitalis freely. On the first of October there was no diminution of her sufferings. I mentioned to the Doctor the case above related, and observed to him that as the same medicine was often efficacious in different diseases, as Mercury and many others, and as the one I proposed had not been, in any respect offensive to the system, in so desperate a case, it could not be improper to employ the infusion, in aid of the other authorised means we were pursuing. He readily gave his assent, and having prepared it that evening, she commenced the use of it the next morning. On the 3d she escaped the paroxysms of fever, nor did they afterwards return, except a very slight accession on the 10th, the cough continued very troublesome for some days after the fever ceased. On the 7th she rode out in a carriage, and was much benefited from the exercise. On the 9th my remark is, "She is improving beyond the most sanguine expectation." The following evening she had a slight rigor, but felt from it very little inconvenience and might have been more owing to a stream of cold air than from the original cause of her disease. On the 16th we ceased to visit her in

consultation, and by the end of the third week from her commencing the use of the infusion, she was restored to perfect health.

The next case that occurred was a Mr. M. G. He had been many voyages to the West-Indies, and had contracted there a very obstinate Lues venerea, for which he had previously consulted different Physicians, but probably his very irregular conduct rendered their efforts abortive. I first saw him on the 6th March 1804. He had then a phagedenic ulcer on the end of the glanspenis which had destroyed much of the substance in the vicinity of the meatus urinarius. He had also an ulcer on the thumb and left index, which may be believed to have been occasioned by the matter of the ulcer on the penis having had access to an abrasion of the cutis on these extremities. However this may be, they proceeded *pari passu*, he continued in this state until the beginning of May, the ulcers proving incorrigible. I then thought of the herb, the infusion of which had been twice so serviceable in refractory cases. It had then appeared, as it is an annual plant. I procured a parcel, prepared the infusion as before and in three weeks the ulcers were healed, and his health as much restored as was compatible with the weakness induced by varied and continued use of mercurials, the warm bath and other most authorised measures that were pursued.

During this period I was not able to acquire, either from consulting the best botanical works, or those to whom I had access possessing a knowledge of that Science, the *ascertained* character of this very interesting vegetable, when I received a visit from Mr. Rafinesque Schmeltz, an Italian gentleman who had resided several years in this country, and dedicated much of his time in collecting plants, and in preparing for publishing an account of all the productions of

this country. This work is announced in the 5th Vol: of the second Hexade of the Medical Repository, and exhibits such a profound knowledge of the subject as must render it, when published, a most valuable acquisition, not only to the Botanist but to the Physician, as the virtues of every plant will be an object of his particular attention.

I was rejoiced to meet with so effectual a means of obviating my difficulty. He accompanied me to Canton, the name of the place were I had obtained the plant, and on seeing, he immediately pronounced it to be the Sanicula Marylandica, as described by Linnæus, and of which you have given a correct account.

I was then enabled to learn what had been said of it by the different authors. I had a considerable quantiy of it collected; had it variously prepared, in powder, decoction, syrup, and continued the use of the infusion in similar cases to those adduced, and many others. I was so unfortunate as to fail in every instance, or at least to find no benefit proportioned to what I have faithfully related. It was this which discouraged me from publishing them; but as you have found it so useful, it is evidenced that it may afford very extensive advantages, and I hope the farther investigation of it will be diligently prosecuted. It is remarkable that the benefit with me was derived from the cold infusion, soon after the plant appeared. There is one crop in Spring and another in Autumn, and it was at these two seasons I employed it with so much success.

The history of the Sanicula in the old and in the new world gives occasion for a reflection that may not be unworthy of notice, and in some measure verifies my opinion that the human race have been led to the use of means for their preservation independant of the exercises of reason, or the efforts of scientific characters. It also suggests that

the knowledge we do possess must have been derived from a common source, ascending, in both worlds from generation to generation until that period in which they had the same origin, and from whence they proceeded in various directions, carrying severally with them the knowledge of what was most essential. Should this idea be impressed on the minds of the American Botanists, and they should study to acquire the knowledge of plants possessed by the Indians, they may perhaps discover a sameness of opinion in the various inhabitants of the Globe on the same subject, I mean such as are most interesting to life, far beyond what would occur to superficial observers. With every wish for your successs in an undertaking which I have no doubt will prove extensively useful,

I am Dear Sir,

Yours sincerely,

JOHN CRAWFORD.

Baltimore, December 16, 1803,

MEDICAL AND PHILOSOPHICAL

REGISTER.

[The following report of a trial for Bastardy, contains the opinions of so many learned men, "touching the principles of generation" that the Editor has thought it would be not unacceptable to his readers, and offers it a place in the language of the Reporter without comment.]

THURSDAY, AUGUST 18, 1808.

PRESENT, *The Mayor, Recorder, and aldermen Mott, Bingham, and Drake.*

THE CAUSE CAME ON PURSUANT TO THE ADJOURNMENT.

MR. VANHOOK, counsel for the Commissioners of the Alms-House made a short opening of the case. He said the points upon which it had been drawn into doubt, and which occasioned the reference to the decision of this court, were two—First, whether the witness was to be beleived—Secondly, whether the fact she swore to was possible. He observed that although many witnesses of learning and experience in such subjects had been called to give their opinions for the satisfaction of the court, yet he conceived it

to be a matter on which technical knowledge could not throw much light; and that each of the members who composed the court were as well able to form a correct opinion as any professional man whatever. The woman had already sworn positively; and evidence of opinion that went to contradict a positive oath should be received with many grains of caution—the more so, as those opinions would probably be opposed by others of very great authority. But he thought, unless the woman could be otherwise discredited, such opinions, opposed to positive testimony, were of little weight, and ought to fall to the ground.

Lucy Williams was then called and sworn;—the child and the reputed father, Whistelo, were also produced.

Question by Vanhook—Do you know Alexander Whistelo.

Answer. Yes.

Q. Tell the court whether he visited you; at what time; and what the result was.

A. It will be two years this August since I first saw him; he then told me he was a married man divorced from his wife, and never intended to live with her again.

Q. Did he say he wished to marry you.

A. Yes; both before he went to sea and after he came back. He told others so also—he told Mrs. Hoffman, and———

Q. Did you consent to mary him, or did you refuse.

A. I refused; for I did not chuse to have him—I did not love him. He then carried me to a bad house, and locked the door—I scuffled with him a long time; but at last he worried me out. He went after that to sea, and after he came back I told him I was with-child.

Q. When was the child born.

A. The 23d of January, 1807.

Q. What was the day on which the affair you have related took place.

A. The 13th of April, 1806, on Sunday evening.—Whistelo first took the child to himself; but afterwards when they put it into his head that it was not his, he refused to maintain it.

Cross-examined by MORTON.

Q. Did he ever say it was his child.

A. No; but he took it at first.

Q. You say you became acquainted with him in August, 1806, how do you know the child was got on the 13th of April—how long after that was it till Whistelo went to sea.

A. On the 1st of May following.

Q. When did you next see him.

A. Not till the 4th of August following.

Q. When did you first perceive that you were pregnant.

A. Before his return.

Q. How did you know it.

A. By feeling life.

Q. When did you first feel that symptom.

A. Near two months before he returned.

Q. Then it was one month after he went away.

A. Yes.

Q. Did he not go a third time to sea.

A. Yes, in October: and he was gone for the fourth time about eight days when the child was born.

Q. You went to a bad house—how do you know it was a bad house where he took you.

A. Because no other would take in a man with a strange woman in that manner.

Q. Then you went to a bad house knowingly with him.

A. I thought he was taking me to his cousin mrs. Gough's.

Q. Were you always constant to him in his absence; were you never unfaithful to him when he was away.

A. I never did when he was at sea.

Q. Had you not a white man in bed with you.

A. I had a scuffle with one once—I knocked off his hat.

The witness being pressed by the examination of Mr. Morton, at length confessed that such a person had been in bed with her: that he had turned the black man out with a pistol and taken his place—that they had a connexion; but she said she was sure they had made no young one, for they had *fit* (fought) all the while. She said if the clerk had been at home he would not have used her so.

Q. Why. Did you cry out.

A. No, I did not hollo.

Q. Then what did you do to prevent him from executing his purpose.

A. I bid him be quiet.

Q. Is the child a boy or a girl.

A. A girl.

Q. Of what color were your parents.

A. My father was white, he was a Scotchman, a servant; and my mother was a dark sambo.

Q. How did the scuffling end—you understand me—did you part friends with the white man.

A. He owes me four dollars which he would not pay me.

Q. Was that *your charge*.

A. He owes it to me for wages.

Q. But you took it out in scuffling.

Dr. Kissam sworn,—After examining those parts of the child which particularly indicate the color of the race, said, he should not suppose, judging from the general rules of experience, that it was the child of that black man; but on the contrary of one of lighter complexion than the mother. Black persons are almost white at their birth, but change soon after.

Question, by Sampson.—How soon is the change generally complete, and their true color decided.

A. Generally about eight or nine months. Within the year it is complete.

Dr. Hosack sworn.—From the appearance of the father, the mother, and the child, and the laws of nature which he had uniformly observed in such cases, he certainly would not take it for the child of a black man. But would say it was that of a white one, or at most of a very fair mulatto.

Cross-examined by VANHOOK.

Q. Has it not some of the features of a negro.

A. If its features in my judgment were those of a negro, I should not have given the opinion I did.

Q. Doctor Hosack, might it not be possible, judging after your reading or experience in such matters, that in the early stage of pregnancy the agitation of the mother's mind, irritation, terror or surprise, might alter in some degree the nature and appearance of the child.

A. I am not of that opinion.

Question, by Morton.—What is the period at which a mother becomes sensible of her pregnancy, (as the witness calls it) by feeling life.

A. From three to four months; but four more commonly than three—at three it very rareley happens.

Several questions were put to this witness by Mr. Nitchie touching the albinos, their livid color, and symptoms of disease and debility, with a view to obviate an attempt to account for the fairness of this child by such analogy. The witness answered that their entire appearance showed them to be exceptions to the ordinary laws of generation.

Dr. Post sworn.—From the appearance of the child he would suppose it the offspring of a white man and a mulatto

woman, or of two light-colored persons. He could discern none of the features of a negro in it. There were instances of black men with black women producing children as fair as this; but they were exceptions to the general laws of nature. His opinion was, that this was not the child of Whistelo. What confirmed him most of all was the color and straightness of the hair. Being questioned as to the albinos, answered he never had seen any of them, but from what he has learned from books and conversation is convinced that there is no analogy.

Dr. Seaman sworn.—I should not believe the negro to be the father of that child.

Dr. Tillary sworn.—Was fully of opinion with the other gentleman—could not conceive this the child of a black man. He had no principles of physiology nor philosophical data to lay down touching *ticks* of that sort.

Dr. Moore and Dr. Anthon Declared themselves of the same opinion.

Dr. Secor Saw the child in question at its birth, it was then quite white; from its appearance at that time and now, he is of opinion that it is the child of a white man.

Dr. Williamson Said he had seen and observed both the man and the woman. If this was the child of the woman by that man it is a prodigy, and he did not believe that prodigies happened, though daily experience unfortunately proved that perjuries did.

Dr. Osborne, who, from a long residence to the southward, had had the most ample means of observing all the varieties that these mixtures of race occasion; but had never seen any fact that could warrant him to suppose this the child of a black man. He had seen albinos, but this child bore

no resemblance to them. They were always distinguishable by the red dotted iris and the tremulous movement of the eyes. Never had seen the produce of African parents with hair such as this. He had seen some with fair or yellowish hair, but that was peculiar.

Mr. Furnam, Keeper of the Alms House, Testified that he had received an order to take the child and place it on the books. The black man, Whistelo, took the child, but said at the same time that it was not his.

Dr. De Witt said he should have no doubt that it was the child of a white man.

Adam Ray, a black, knew of Whistelo having taken the child to board, and of the mother having it carried away.—He asked her reasons for taking it back; and her answer was, that since he would not own the child at first he should not have it now, for it was not his.

Nancy Cooke lived together with the witness six weeks—could not say as to her character, but saw a very *light* man in bed with her. There were two beds in the room; Lucy Williams had one, and witness the other. Witness fell asleep. Man lay with Lucy all night.

At the request of the counsel for the commissioners of the Alms-house, the cause was adjourned till Saturday, as he professed the hope of procuring by that time other witnesses whose testimony would tend to throw a different light upon the fact, and which he conceived altogether material and important to the ascertainment of the truth.

After some opposition on the part of Mr. Morton, who said he was under the necessity of going out of town, the cause was adjourned, and Mr. Sampson, who was present in court, was engaged to assist Mr. Nitchie in the further

investigation of evidence, and to sum up on behalf of the defendant.

SATURDAY, AUGUST 20.

PRESENT, *The Mayor, Recorder, and Aldermen Mott, Bingham, and Drake.*

Dr. Mitchill, sworn—the woman, the child and the defendant produced.—The witness was first examined in chief by Mr. Vanhook on the part of the Commissioners of the Alms-house.

Counsel. From your observations upon those persons, Dr. Mitchill, and from what you know of this case, be so good to state your belief, whether that child is or is not the child of that black man.

Witness. It is then expected that I should give an opinion touching the parentage of the child ?

Counsel. Yes, sir ; whether from all the circumstances you believe that black man to be its father.

Witness. It may be expected, perhaps, that I should give my reasons for my opinion, that it may be judged upon its own merits ?

Counsel. If you please, doctor. The more so, as the counsel on the other side will probably inquire into them.

Witness. There are three general rules, as far as I understand, touching the propagation of men between the white and black race—First, when the connexion has been between white and black, the offspring is a mulatto—second, when the child is produced from an intercourse between a white man and a mulatto, it is then called a quadroon—thirdly, when it is between a black and a mulatto, it is called a sambo.

In the French and Spanish islands there are more minute distinctions ; but for more certain information witness re-

ferred the court to Bryan Edwards's History of the British Colonies in the West-Indies, by which any errors of his memory might be corrected The principle, however, is, that the shade is between the two in equal degree; and it is told in a way that meets my assent, that, when a rapid succession of intercourse has taken place between a woman and two men of different colours, twins have been produced of the opposite colours.

Morton. What are we to understand, doctor, by rapid succession?

Answer. When a white man succeeds to a black, or a black to a white almost instantaneously.

Question. Do not accidental causes sometimes operate a change on the fœtus at or after the time of conception.

Answer. Yes, sir.

Question. Will you be good enough to describe them.

Answer. The changes which take place in the human form during the time of conception are reducible to three heads, according the observations of D'Azara in his history of the quadrupedes of Paraguay—First, when there is an alteration of the complexion so as to render the skin of a black, white, or other variety of color—Second, when the cause or agency manifests its power by frizzling or curling the hair or feathers, this is termed *crispation*—Third, when the same constitutional change shows itself by a loss of hair or plumage so as to leave a naked skin, it is called *peeling*. Of these three effects the last occurs but seldom; the second pretty often; and the first is very frequent indeed, showing that it is a much more difficult process for nature to eradicate hair or feathers than to curl them, and more difficult to twist than to change their color. If it be of any importance to investigate minutely these points, they will be found at length in the work I have mentioned. These accidents, says that author, may befall every man, every quadruped, and every

bird, to a greater degree in some than in others, and become permanent in the race by propagation from one generation to another without end.

With this view, it would appear, that with respect to the rule we first laid down touching the color of men, there are a vast number of exceptions, which exceptions I shall class under the three last mentioned heads. It is only by comparing those facts with the case before the court and applying the observations which they furnish, that we can pronounce an opinion; for as to reasoning a *priori* upon such a subject, neither the court, nor I, nor any other witness that can be brought, can know any thing of the matter. The most that I can do is to state facts that I know, and from them give my opinion upon the probability of the case. The woman here swears the black man to be the father of the child——

Morton. Doctor, I am sorry to interrupt you; but it is necessary I should remind you that the witnesses are only called to give testimony, not to observe upon it—that will be the duty of the counsel in summing up.

Witness. In estimating this case according to the exceptions laid down, and which I have observed are so frequent, and often so widely deviating from the general rule, I conceive that it violates no probability to suppose this child the offspring of the connexion between the woman and the black man. The mother, who knows most of the matter, has deposed to that fact, and it is not in itself incredible. I have, therefore, no hesitation to say, according to the best of my judgment, as the evidence of the woman is positive, and the fact she swears to violates no probability, I should, were I in the place of the court, confirm the rule.

Morton. Doctor, you must excuse me—before you seemed inclined to do the office of counsel, and now that of judge.

Cross-Examination.

Question by Morton. This case you say, doctor, violates no probability. Are we to understand from that that it is a

possible case or a probable one ?——or let me ask you, according to your own principles, which is most probable, leaving the woman's evidence out of the question, that this should be the child of a black or a white man.

Answer. *Prima facie* I should say it was a case under the general rule. If I did not adhere to the rule it would be on account of the circumstances attending the case, which I take to be an exception; for if I have no knowledge of any matters which go positively to contradict the woman's testimony, I should naturally lean towards it.

Question. Do you consider this case as having any affinity with what is called albinage.

Answer. I have not much experience on the subject of albinos, as my residence has been chiefly in New-York, where such accidents rarely occur. But I have known instances of negroes turning white where there was no symptom of disease or sickness.

Morton. Have the goodness, doctor, to relate them.

The witness then related the case of Henry Moss. The Reporter having since obtained the original note of that case in the witness's hard-writing, for more certainty thinks it proper to insert it literally.

MOSS'S CASE.

"Some time in the year 1792, Henry Moss, who was born of black parents, and as black himself as negroes generally are, began to grow white. The first whiteness began about the nails of the fingers; but in the course of the change none of them have fallen off, except those of the little toes. There has been no scabbiness, ulceration or falling off of the cuticle—nor could this covering be removed by rubbing, washing or chafing. The whiteness has spread over the whole body, neck, shoulders and arms, and down the thighs and legs. Some brownness remains in his face, hands and feet. He thinks his sense of touch more acute than it used

to be; and his feelings so sharpened that he is more readily affected by solar warmth than he formerly was, being able, while he was black, to support great degrees of sun-shining heat. A change has taken place in his sight. He has had no sickness before or during this alteration of color to account for it. The skin is of the white carnation hue, and the blue veins plainly visible through it. The *rete mucosum* seems to have undergone the principal change. His woolly hair is falling out and straight hair coming in its place on his head; and the same thing has already happened on his legs. He observes his flesh is now less disposed to heal from wounds and cuts than it used to be."

Q. Are there no other facts which influence your opinion.

The witness here mentioned two other cases, which for the reason above given, the Reporter copies literally from the Medical Repository.

MAURICE'S CASE.

"A young negro, named Maurice, aged twenty-five years, began, about seven years ago, to lose his native color. A white spot appeared on the right side of his belly, which is now about as large as the palms of two hands. Another white spot has appeared on his breast, and several more on his arms and other parts; and the sable cloud is plainly disappearing on his shoulder. The skin of these fair spots is not surpassed by the European complexion. His general health is and has been good; and he has suffered no scalding, ulceration, scabbiness, or other local disease. The change is not the dead white of the *albinos*, but is a good wholesome carnation hue. Such an alteration of color as this, militates powerfully against the opinion adopted by some modern philosophers, that the negroes are a different *species* of the human race from the whites, and tends strongly to corroborate the probability of the derivation of all the *varieties* of mankind from a single pair. Facts of this kind

are of great value to the zoologist. How additionally singular would it be, if instances of the spontaneous disappearance of this sable mark of distinction between slaves and their masters were to become frequent! They would then be no less important to the moralist and political economist."

POMPEY'S CASE.

"Pompey, a very healthy negro, of about twenty-six years of age, about two years since discovered on his right thigh a small white spot, which, from that to the present time, has been constantly increasing to the size of nearly a half-crown piece; while there have appeared, on other parts of his body, other spots, to the number of twelve, of different sizes, but all constantly and gradually enlarging. In several of the spots the margin is perfectly defined, from a distinct line between the clear white and the natural color. In others there are circumscribed rings of a dun appearance, the external margin of which is very regular. I have the fullest belief that a very few years will complete the total change."

Q. Was there not some other case which you mentioned before the police-office.

A. I mentioned somewhat jocularly the loves of Theagines and Chariclea. Chariclea was a beautiful and fair virgin, of Ethiopean parents. Her whiteness was occasioned by her looking on a statue of Venus.

Question by the Mayor—About what time, doctor, might that have happened.

A. The work is written by a Christian bishop, Heliodorus, who wrote about the fourth century. It was the first novel I ever read, and made a great impression on me.

Q. As to those cases in which the agency of some external objects upon the mother's imagination produces an entire change in the fœtus, have you any facts within your own knowledge.

A. There was a man in the city of New-York, who kept a cow.

Q. Will you tell the court, doctor, the story of that cow.

A. The cow was a favorite with the wife of the man; but he found it more convenient to kill her than to keep her.

Q. And how did the death of the cow influence the birth of the child.

A, The cow, affording a larger supply of provisions than was required for family consumption, he sold part and reserved the rest.

Counsel. Very well, sir, be so good as to relate the rest.

Witness. Among the parts that were reserved, were the feet. The wife saw them hanging up in a mangled state. It was the first news she had of the death of her favorite cow; and she was so vehemently moved and so shocked, as to affect the child of which she was then pregnant.

Q. And what was the result.

A. The child was born without any arms and distorted feet.

Q. Did you ever converse with the father or mother of the child.

A. I did not. But the child is still alive; and there is no doubt of the fact.

Q. Have you examined the child.

A. I saw it once as I passed, playing with a coopers' shaving-knife between its toes. I stopped to inquire, and was told the story.

Q. Is there no other case, ancient or modern, to support this theory: Is there nothing in verse or prose.

A. There is a case, called the black case, in Haddington's poems. He was a lord of sessions, or other considerable man in Scotland. The story runs thus:—There was a man who followed the profession of an attorney, or a scrivener, who had a very amorous wife. But he had not leisure to attend to all her gaieties. Once, that he was una-

ble otherwise to free himself from her opportunity, in toying with her he upset his ink-bottle in her shoes. She brought him a black child in consequence. He reproached her, but she reminded him of the ink-bottle, and of his awkwardness.

There is also the story told by Malebranche, of the woman who saw a man broken on the wheel, and bore a mangled and disjointed child.

If such changes as the last are true (and there is strong authority for it) then the mere change of color or complexion is not difficult to believe.

The cross-examination of doctor Mitchill was continued by Mr. Sampson; and extending to a variety of topics, produced much anecdote and repartee.

The subject of the albinos was fully discussed. Their feeble structure—weak eyes—leprous appearance—their being found chiefly in low latitudes; and the Chacrelas of Java, the Bedas of Ceylon, and the white indians of Darien, were instanced; who are all within the 18th degrees of north or south latitude. Mr. Buffon's opinion was cited, that they were not a distinct race, but individuals degenerating from black to an adulterated white: supposing the blacks to have degenerated originally from white to black. But as it was admitted, that the whiteness of this child bears no resemblance to that of the albinos, and cannot be explained on the same principles, it is unnecessary to pursue all the details of the examination on that point.

The proximate cause of the fairness of the albinos, was stated to be the absence of the *rete mucosum*, which gives color to the black men: and the dots and redness of the eyes in albinos was supposed owing to organic debility, which admits of extravasation of the blood, and of its lodging in globules in the iris. The want of that *rete mucosum*, which fortifies the eye of the negro against the sun's glare, is the reason at once why the eyes of an albino are unable to bear the sun, and more fitted to see by night.

Mr. Sampson mentioned the two children of Chamouni, or albinos of the Alps, with whom he had frequently conversed. He compared their eyes to those of owls and other animals, fitted for night or long twilight, which called forth an anecdote from the witness of a numerous flight of white arctic owls, which had some years ago visited this city, remained some time, and then disappeared, having never been heard of before or since. The witness also mentioned the white sparrows of Sweden, the bares of Albany, and a white bird with which he had been regaled in Canada, whose flesh was very delicate. But to a question put by the counsel, he answered that he had never seen a race of white deaf dogs.

Mr. Sampson then apprised the witness that since his opinions were likely to be unfavourable to the side he was to advocate, he must avail himself of the privilege of cross-examination. It would be necessary with so learned a witness to say, that the adverb *cross* was not to be taken in the vulgar acceptation. *Cross* was in contradiction to *direct*; and cross-examination meant only an indirect examination.—The ignorant, who take things in the wrong sense, often shew ill-humor, and put themselves in an attitude to be *cross*, because they are to be *cross*-examined. With the candid and enlightened, it proves often an agreeable mode of discussion, and is particularly so to our profession, when it gives us occasion to extract from those of superior learning, knowledge which we might not otherwise have the means of acquiring.

The witness expressed great readiness to answer any question for the satisfaction of the court or the counsel; and the examination proceeded as follows:

Counsel. What do you think, doctor, of the opinions of Plato, touching the principles of generation?

Witness. Do you mean also to ask me Pythagoras's opinion on wild-fowl?

Counsel. Far be it from me, sir; that question might serve to puzzle a man who was in the dark—mine are meant to elicit light from a source where it abounds.

Witness (bowing). I do not know, sir, to what particular opinions you allude.

Counsel. To his triangle of generation, as well as to the harmonies and mysteries of the Number Three.

Witness. I have never devoted any attention to such mysteries. A triangle has three sides and three angles, if you can find out the mystery of that.

Counsel. Has not a prism three sides and three angles?

Witness. It has.

Counsel. Could Plato have meant that any thing resembling a prism could have an influence in generation?

Witness You seem, sir, to have thought enough upon the subject to judge.

Counsel. Sometimes the more we look the less we see.—Can you, upon any principles of plane or spheric trigonometry, produce a triangle which shall be flat on one side and round on the other?

Witness. That, perhaps, is an Irish triangle; if so, you can produce it yourself. Will you permit me now, sir, to *examine* you a little?

Counsel. Oh, doctor, you cannot be serious—not surely in the face of the court!

The Mayor. I think, Mr. Sampson, after the manner in which you have examined the witness, he is entitled to what he desires.

Counsel. Alas, sir, I am but a poor tradesman, laboring in my vocation:—if I let him wind that long chain of causes and effects round me, I shall be so entangled, I shall never be myself again. It is play to him, but death to me.—I pray the court to let the shoemaker stick to his last.——Doctor, are you familiar with the opinions of Aristotle upon matter and motion?

Witness. Your question, sir, is very general.

Counsel. I shall be more particular—Do you believe that matter is the capacity of receiving form ?

Witness. I believe there is a first cause which is the law to which all matter is subject.

Counsel. That first cause is too far off for my span ; let us keep to one less remote. Is it not a corollary from the opinion of Aristotle, that the son should resemble his father?

Witness. I do not see that it is.

Counsel. I wish, doctor, I could establish some difference between you and these great luminaries of ancient times.—The authority of your opinion requires some such powerful counterpoise.

Witness. Well, sir, propose your questions.

Counsel. Since I cannot press these great men of antiquity into our service, I shall endeavor to find something in doctor Mitchill, to set off against doctor Mitchill. The counsel on the other side will not fail to avail himself of your opinions to the utmost extent, perhaps beyond your intention. I wish, therefore, by taking your opinion touching the probability of other facts, to find what degree of belief you attach to the present, and by establishing a standard of faith, fix a boundary line between us ; and also to discover if possible, how much light learned opinions may throw upon this cause.

Witness. Some years ago there was a machine invented, called a light guage, or photometer, which was to measure the degrees of both light and shade, but part of it always failed or broke; or, for want of encouragement, it never was brought to perfection.

Counsel. Oh what a pity! I once projected a machine to measure happiness, wisdom, love, and other moral qualities and affections; but the ladies secretly discouraged it, fearing to have it known how they loved the fellows. Since then that our machines are out of order, doctor, we must

proceed by the imperfect mode of our fathers. Are you acquainted with a story related by Mr. Saussure, of a lady of quality of Milan, who had seven sons?

Witness. I have no recollection of such a story.

Counsel. It was this: the two first of her sons, and also the two last had brown hair and black eyes; the three intervening had blue hair and red eyes.

Witness. Very possible.

Counsel. That is not all. The author accounts for it in this way: that while the mother was yet pregnant with the three red-haired and blue-eyed children, she had also conceived a violent passion for milk, in which she indulged to excess. This might have passed for a traveller's story.—But it is adopted by an eminent physiologist, Mr. Buzzi, surgeon of the hospital of Milan. What would you infer in such a case?

Witness. I would infer that the milk must have been blue, such as they sometimes sell mixed with water; otherwise I cannot see how it made the children's eyes blue.

Counsel. I think not, doctor they would have been rather of a cream color. It must have been milk and water, or skimmed milk. It is a loss that the case does not mention which. Do you think it credible, sir, that Louis the II. king of Hungary and Bohemia, was born without his epidermus or scarf-skin?

Witness. It is not impossible.

Counsel. Yet for a king to come without his skin, that was coming very naked into the world. What do you think of Zoroastres king of the Bactryans?

Witness. I have never thought about him.

Counsel. Pliny says he came laughing into the world—is that probable?

Witness. It would be an exception to the general rule, for we generally come into the world crying.

Counsel. And seldom go out of it laughing: so that as the only time we have to laugh is when we are in it, it is wise to profit by it. Do you recollect Pliny's remark upon this king; that he little knew what a world he was coming into, for if he had foreseen his destiny he would not have been so merry.

Witness. It was a witty remark of Pliny if it was his.

Counsel. Apropos. May I ask what you think of the opinion of the great Verulam that when mothers eat quinces and coriander seed, the children will be witty.

Witness. Some persons have a great deal of wit, but I don't know how they came by it.

Counsel. Do you think, doctor, as the counsel on the other side does, that a pistol is an instrument of much efficacy in generation?

Witness. On the contrary, sir, a pistol is generally used to take away life. There is what is called the *canon de la vie.* Do you mean that?

Counsel. Of what color may that be, doctor?

Witness. It may be black or white.

Counsel. Which of the two would be most influential on the birth of a white child?

Witness. Most probably the white.

Counsel. There it is! I will lay my life that is what the man had in his hand when the scuffle began, that so strongly affected the mother. Did you ever hear how the mistress of Pope Nicholas III. was brought-to-bed of a young bear?

Witness. No, sir; but many women have had bearish children.

Counsel. After that, I think they may bear any thing.—Do you find a great affinity in what concerns generation between man and beast?

Witness. Undoubtedly.

Counsel. May not the principle of maternal affection influence in one as in the other.

Witness. I am of that opinion.

Counsel. So that when the dutch farmers on Long-Island plough a black mare with a bay horse, to have a bay colt, the idea is not unreasonable?

Witness. There is nothing unreasonable in ploughing a black mare with a bay horse nor in a black mare having a bay foal, more than a black hen having a white egg.

Counsel. Does not Mr. D'Azara lean to the notion of a primitive color.

Witness. He gives the philosophers their choice in supposing our first parents to have been either of white or black complexion.

Counsel. How do you account for the ring-streaking of Laban's lambs? The fact we cannot doubt we have it on such high authority. Does it appear to you an extraordinary interference of providence in favor of an individual, or can it be accounted for by the principle of maternal affection, and by the ordinary laws of nature?

Witness By the ordinary laws of nature.

Counsel. That being the case, doctor, there remains only to thank you for the information you have given us.

AUGUST—1808.

Dr. Pascalis sworn and examined—Said that the child in question appeared to him to be three-fourths white and one-fourth black—that was his impression. But he pronounced with diffidence upon such subjects, as he knew how easy it was to err where there was a want of certain *data*.

Nature was uniform in her works and faithful to fixed rules; and when facts are in dispute or doubt there is no way of forming an opinion but by recurring to those rules which experience has established. Witness had lived long in the West-Indies, and had remarked three principal characteristics of the negro race, and all compounded of it.

First, the crispations of the hair.

Second, the *rete mucosum* which gives the black hue to the skin.

Third, the conformation of their legs and feet.

These characterizing marks are discernible in all the mixtures between black and white; but according as the mixture participates more of one than of the other, so naturally will the hair, the features, the complexion and the structure of the limbs. He had observed further that in general when there happened in any one or more of these distinguishing indications a deviation from the general rule; for instance, wherever the complexion partakes more of the white than, from the known parentage it should be expected, then it would be found that in some other of those indications there will be preponderance the other way.

One example which he cited out of numbers which he had noticed, was the French General Rigaud. He was the son of a white man, a relation of the witness, by a black woman. He was so dark as to differ little from the true African complexion; but in return for that, he had the features and form of a white man—was very handsome and well made. If this principle of nature is not universal, it is, as repeated observations had proved to him, very general. The last symptom of the negro blood which disappears is the crispation of the hair and setting on of the ancle, which he described in technical language amounting to this, that the leg was inserted more forward on the foot, and consequently the heel longer. He, therefore, when he was told that this child was of a black man, examined it to discover whether, seeing its complexion was so unusually fair, there were not some strong traces of the black race to counterbalance that deviation; and upon looking at the conformation of its feet and legs, and more particularly at the straightness and color of its hair, he was disappointed not to find his observation verified; and he was now of opinion that it was not the offspring of a black man.

He conceived the woman to be a perfect mulatto. He had known one instance of a woman of mixed blood having a white skin with the features of a negro strongly pronounced.

Cross-Examined by VANHOOK.

Question. Might not some accident, happening at the moment of coition, produce, by its effects upon the woman's imagination as great a deviation from the general rule as this.

Witness. Why make that particular conclusion? it would be much more apt if it produced any thing to produce deformity or abortion: but it would be too far-fetched to suppose it would cloud or uncloud the skin. Upon the whole, as I am impressed, I must give my opinion that it is not the black man's child.

Alderman Barker sworn—Stated that the woman when examined before him said she had no intercourse with any white man. Afterwards she acknowledged she had a struggle with one.

Mr. O'Blenis, clerk of the police, Stated that after her examination on oath was closed, she was questioned as to that fact, and answered laughing that the white man had torn her petticoat.

Sir James Jay, M. D. examined by Vanhook, Gave a decided opinion that it was not a black man's child, asked whether he lay much stress upon the color and straightness of the hair of the head, and whether it might not yet become like that of the mother. He said it was not necessary to wait so many years as to see what conformity there might be in the hair with the mother. It was enough if the counsel chose to examine the mother at present.

Question by Sampson. Doctor, we have been deep in the mysteries of Lucina.

Witness. Very good, sir, I hope you have profitted.

Counsel. No, sir James; it is a cross birth—we are not yet delivered of our doubts. We want to know whether

the Abbe Spallanzani's method of propagation is a safe and good one—whether there is not such a thing as *Lucina sine concubitu*; for, as it appears, the black man could not have got the child because it is white, nor the white man because of the fighting, it would be good to see whether the pistol-barrel could have got it.

Witness. Then, sir, you must inquire elsewhere touching that matter. I have found the old practice good enough for me, and have made no experiments in the way you allude to.

The evidence closed here, and Mr. Morton addressed the court, premising that it was his intention to be very brief, and to confine himself entirely to the positive testimony and the inferences of law which it furnished, and leave to the counsel associated with him the various topics of curiosity which had been introduced.

After Mr. Morton had finished, another woman was produced with her child. The woman was a light mulatto, and the father said to be a black man.

Sampson. If this be to prove any thing by comparison it is good, provided the object of comparison be certain We must have proof of the parentage of this child, otherwise it is *ignotum per ignotius.*

Mr. Vanhook next, according to arrangement, summed up, and answered the observations of Mr. Morton, leaving to Mr. Sampson the reply.

SAMPSON—May it please the court. If ever the situation of man was full of peril and difficulty, so is mine. My learned colleague has taken to himself all that was *terra firma* in our cause, and when he had brought me to the world's end, plunged me headlong into that ocean of wonders and adventure where I am now adrift. He has, moreover taken away his notes on which I relied, and left me no other chart than this stenographic scrawl, wherein my eyes can discern

nothing but objects of evil omen.* Artic owls, mis-shapen monsters, and prodigious births. Well might I barter one hundred leagues of such sea for half an acre of brown furze. If I escape this time, I will hang up my drooping garments as an offering to Neptune, and never tempt my wayward fortune more.——I will now borrow courage from despair, and to the matter.

Soon after the vernal equinox, in the year of the vulgar era one thousand eight hundred and six, an Adam-colored damsel submitted to the lewd clasps of a lascivious moor, and from that mixture sprang three miracles.

1st. In the course of one month's time she quickened and conceived.

2d. She bare a child, not of her *primitive* and *proper* color, nor yet of that of the African—but strange to tell, of most degenerate white.

3d. And the greatest of these wonders, she remained (as the counsel for the Alms-House charitably testifies) a lady of virtue and unblemished credit!

I had heard of a sect that trusted more to faith than to good works. The counsel it appears is of that sect, when he asks this honorable court to put its hand and seal to three such miracles, I would rather be called ignorant and simple than too learned and perverse. But since I cannot believe in the metamorphoses of old, nor in the procreations of Jupiter Ammon. I am sour upon the belief of all other such heathenish stories.

Before I lose myself in the labyrinth through which I am to tread, that I may not die in the learned counsel's debt, I shall first answer all his observations. If I should miss my way, and never return to where I set out, my will is that all

* Mr. Sampson had taken his notes in short-hand, and the allusion here is to certain emphatical words written in the common character, and of course more obvious to the eye.

concerned shall mourn for me—the whites putting on black, and the blacks white, in token of *affection*. *Item:* the manuscript I hold in my hand to be deposited in the city library. *Item:* the fee which I receive in this cause, to enure to the benefit of the Alms-House.

The counsel says that the reasoning of my colleague has not convinced him. If it had, it would have been a fourth miracle; for certainly the counsel's business here was not to be convinced.

He triumphantly asks why we did not call the white man; and I answer, in simplicity, because we had no need of him; besides he is our rival, he carries pistols; and we disclaim all prying into what does not concern us, and all indiscreet meddling with family affairs.

All the justice we ask for our poor black swain, is not to pay for a child he never got, nor be made a worker of miracles against his will: the thing of all things of which he thought the least, and of which he was the least ambitious.

Again, the counsel asks what motive could the woman have to charge the child to a black father, when she could have had a white one. We do not know why—some love the darkness rather than the light.

But it is said evidence was meritorious, and for the good of the community, charitably, and for the good of the Alms-House. I never before heard of such pious and patriotic fornication.

But if she was disposed to purjure herself, would she not have laid the child to the richest father as well as to the fairest?

Perhaps not. Perhaps she wished to establish a partnership according to the custom of the merchants, long used and approved within this city, to make one a *sleeping partner*, to contribute by his friends; the other the active partner, taking the trouble and responsiblity, and giving his name to the firm. She has herself averred and proved this part-

nership, stated the *locus in quo*, and laid the *venue* in her bed, and it is too late now for the counsel to say it was a transitory action after *issue found*.

There is another legal view of this matter. The child may be a negociable instrument under the statute of Anne, and one party liable as maker, the other as indorser. It is thus that commerce is daily encroaching on the common law. Formerly a bastard was *nullius filius* and could have no father: now it seems he may have two, unless the court will think it is carrying the commercial principle too far. Then if the court will allow only one father to one child it is to be seen whether it will permit another innovation not less violent, viz: that black men shall be the fathers of white children by intendment of law. If a white man can say to a black one, get out of that bed, you black devil, till I do this thing—by division of labor trade will be advanced—you must do your part of the duty and I mine—I will get the child and you shall father it—there will be in this manner employment for us both——Can that, may it please your honors, be the law?

As to a complaint made by the gentleman that we insinuated the evidence on his side to be altogether base, if it be any satisfaction to him we will retract that saying. We will admit that there was first and second fiddle and base accompaniment. But as he is himself the leader of the band, he ought not to complain of the effect.

After breaking a lance upon my colleague in the honor of this daughter of Eve, he attacks the doctors *en masse*. What do they know, he says, more than other men. But that is not all, he goes further and levels a shaft at your honors on the bench, and says you have as much experience in such matters as any doctors or any persons whatsoever. Some gentlemen have a happy knack at saying any thing. If I had even suspected any of your honors of any such experience or at all to have dipped into such matters, even from curiosity, I never should have ventured to hint at it.

After disposing of the faculty in a summary way, and representing all the doctors who don't believe that black men's children may be white, as a set of coasting doctors who don't go out of sight of land, who run by the line and the dipsey lead, he then introduces a doctor as a god upon the scene. Never was a god introduced more apropos. It was truly *dignus vindice nodus*. It was no longer your men of experience who believe nothing but what they see, and tell nothing but what they know, who never go on voyages of discoveries or explore the unknown regions of hidden wonders. Not so doctor Mitchill. At his name all ears stand erect—might and power are his attributes. Be it so. I rejoice in his strength, I glory to magnify him, for if he be that great Ajax Telemonius, who then am I, who have *scuffled* with him for one hour in the heat of a burning day, and come off, if not with victory, with life, which is great honor? And now having returned by the same sallyport through which I ventured out to skirmish with him, once more I plant my standard on the ramparts of the law, and display to the whole camp the trophies I have borne off the field.

It is grievous to see the disposition that pervades mankind to laugh at serious things. But ever, by the side of eminent learning, there is a niche where malice loves to sport. It is a quit rent which the learned owe to us small wits; it is an indemnity for the shade they cast upon us, and we seize upon it by the title of amends. I do very much respect the witness and admire his learning and his candor; but when I think of the odd excursion we have made to discover the parentage of this child of nature, I must either laugh or die of it.

If a witness was wanted with a mind well-stored with facts, he stands unequalled. His is like the magazine of some great commission-merchant, whose high credit and extensive correspondence brings him consignments from the four corners of the earth—with room for all, and no particular

reason for rejecting any, whoever would make up an assortment to answer any demand, may call upon him. If the wares be not all his own, he has a factor's lien on them and a vested interest, and may dispose of them for the benefit of the concerned. If he parts with them without *warranty*, and there is no *scienter*, then they are at the risk of the party who receives them, and the maxim is *caveat emptor*.

It was with this view of ascertaining how far these facts were warranted genuine, or in other words, how many ounces of such testimony went to the pound, that I put so many questions to doctor Mitchill. I wanted to know whether we were to take by the Winchester or the standard bushel—whether our long measure was the ell Flemish or the common yard ; and the court will very clearly comprehend, or else will not comprehend how we came to treat of Plato's triangle of the virtues of the Number Three, and of the probability of the opinions of that great philosopher—viz. that when men and women hold this sort of *tete-a-tete*, it is only for the sake of completing a triangle. If I did not pursue that curious subject further it was for this reason : from the moment I found out that a triangle had but three sides, I saw that the doctrine would not apply ; for make what angle you will of a man and woman, still as each has two sides *at the least*, a right and a left, the diagram which they describe must have four, not to speak of others that I am ashamed to mention.

We passed on to Aristotle ; but with all his form and his substance, his matter and his motion, his cause and his effect, he could not inform us how, without violating probability, the black man could get the white child ; and therefore as we gained no light we had no need of any photometer to measure how much. Fearing to trust myself longer in the dark, I passed on to the next topic, recollecting an old maxim :

Desperes tractata niitescere posse relinquas.

But I had the consolation to think, that for all that had yet passed between us, nobody was a bit the wiser.

The albinos, with their blood-shot eyes and white hair, with the arctic owls, swedish sparrows, and white birds of Canada, I leave to the curious in wild fowl.

The strength of the adversary's case I take to be this: that at a critical moment, after Mr. Whistelo and Miss Williams had been just long enough in bed together to be drawing towards a perfect understanding of the business which brought them there, the lady saw, or thought she saw, an apparition of a white man making towards her with his cocked pistol in his hand; and the true point now is whether that apparition did of itself beget the child, or only change it from black to white after it was begotten, by acting upon the nervous system of the mother. The counsel showed a skill more than professional, which convinced me that he had gone deep into this subject and probed it successfully. He understands the doctrine of animal appetencies, if not of chemical affinities.

It is curious to see how the learned will differ; Professor Roederer denies the effect of maternal imagination in changing the form or color of the fœtus; and for so doing he gains the prize medal of the University of Goettingen. Doctor Mitchill maintains the effects of maternal imagination with all his might. And another profound and ingenious philosopher, doctor Erasmus Darwin, denies this power in the female imagination; but demonstrates its existence in the male, and says that the Calipœdia, or art of getting beautiful children, as also of procreating males or females, *may be taught* by affecting the imagination of the male parent; for he says that the delicate extremities of the seminal glands irritate the organs of sense, either of sight or of touch. He recommends the art very seriously to those who are interested in the procreation of male or female children; and observes that the *phalli* which were hung round the necks of

the Roman ladies, or worn in their hair, might have caused the great proportion of male children. He laments finally that the manner of accomplishing this cannot be unfolded with sufficient delicacy to meet the public eye. And I fear myself the squeamishness of the age to be such, that if any professor should propose a course of lectures, or any artist advertise to give lessons in this art, he would find very great difficulty and discouragement. A reflection, by-the-bye, involving a satire upon mankind, since it is notorious that the most delicate of both sexes practise, with shameless hypocrisy, what is too bad, it would seem, to be spoken of without offending decency. I greatly wish, therefore, that the Abbe Spallanzani had brought his methods into general use, notwithstanding the slighting manner in which sir Jas. Jay has treated them, because it would be a means of quieting the most scrupulous delicacy, and relieving persons of elevated sentiment from the necessity of course familiarities; and be more suitable every way to the delicacy of the age.—But as far as concerns the present point, whether Roederer, Mitchill or Darwin prevail, the cause is not a whit advanced; for allowing that this white man operated upon the organs of sight or touch, whether of father or mother so as to whiten the child, such a position would give birth to two doubts, more perplexing than any yet appearing. First, touching the identity and individuality of the infant, of which individuality color is a part. For if one makes a child black, and another makes it white, shall it, while it continues white, be said to be the child of the father who made it black, and not rather be taken to be his who made it white? Even upon legal principles such an act of ownership, exercised by a man over the child of another, as bleaching him, without authority, entitles him, whose child was so bleached against his consent, to abandon altogether to the wrong doer, and to throw the child upon his hands. Certainly, if such a principle be established, as that white men can father their chil-

dren upon negro fathers, it will very much advance industry, and encourage many to go abroad for employment who now stay at home.

But to return to maternal affection. A fair lady, to whom his holiness Pope Nicholas the third, had committed the sacred charge of bearing him *nephews and nieces*, brought him, to his utter discomfiture one day, a little *bear*—and why? why, because he was of the Ursini family, and had every where throughout his palace carved and painted emblems of the name and honors of his house. Pope Martin the fourth, who succeeded to the chair, the palace, and the mistress, fearful of like mischief had them all effaced; and accordingly his nephews and nieces were nice little *popines*, no more like bears than Miss Williams's child is like a Negro.

At Tzertsogonbosh, in Germany, there was a religious procession. Some of the inhabitants personated angels, and some devils. One of the devils, more merry than wise, took it in his head, as soon as the pageant was over, to run home to his wife, and accosted her, if not in these words, in words to this effect: "You dear plague of my life, for all the vexation you have caused me from the beginning of the world till the date of these presents, I am determined forthwith to do in sort that you shall hereafter be the mother of a young devil." She scuffled, he "worried her out, and had a connexion with her;" and whether she *felt life* in *one* month or four, she finally bore him a young devil. Doctor Mitchill saw nothing improbable in a fellow playing the devil with his wife, or begetting a little devil. He thought it prudent, however, to inform himself whether it was a dancing devil. I am cautious in what I relate; and as I did not know what dancing-master it had, I would not undertake to say: it was, however, a merry begotten devil, and probably a dancing one; and it is not impossible that it might have been one of those that tempted saint Anthony,

twenty thousand of whom it is said could dance a saraband upon the point of a cambrick needle without incommoding each other.

That the learned sometimes account for things quite differently from the rest of mankind, will appear from the sequel of the story of the lady of Milan and her seven sons.—There was a tattle when I was at Milan, but as those who believed it had not read *Simon Pontius de Coloribus oculorum*, it may be entitled to small credit. There was, they said, in those days a young scotch laird, blue-eyed and red haired, who made the tour of Italy to see pictures and statues, and kiss the pope's toe; but that his devotion was principally warmed by the image of this Cisalpine saint, that he came at different times to worship at her shrine, and finally, that it was he who recommended the milk that turned the children's hair red.

So much for maternal affection with human kind. But as there is comparative anatomy, why not comparative zoology: and, unfortunately for the pride of man, in the act on which our philosophers and doctors have delivered their opinion, the similarity is entire. Poets have viewed it in the same light; and the prince of poets defines it to be making the beast with two backs. He too, by the bye, was for the *matemat* affection, for he makes Iago alarm Brabantio, least Desdemona should "be got with-child of a barbary horse," and he should have "coursers for cousins and gennets for germans." It was conformable to that idea that I asked doctor Mitchill whether the farmers on Long-Island could reasonably expect to have a bay foal when they ploughed the black mare with a bay horse. He saw no more wonder than that a black hen should have a white egg: and then would have been the time, but for fear of lengthening out the trial too far, to have discussed the great problem of the eternity of the world, which many venerable philosophers, according to Censorinus, supported by the single argument

of an egg.—For they said no egg was produced without a bird and no bird without an egg; and as it never could be shown which was first formed, it followed that the world had no beginning. We might have shewn upon the authority of Aristophanes, how the world was produced by divine love, and divine love from the egg of night, hatched by chaos. If we had been prepared to go into eternity, *there* would have been a range! *There*, was a subject fit for philosophy—one *never to be determined.*

Touching the old cow that was killed, I can only say that whatever doctor Mitchill says he saw, I believe as if I had seen it, I therefore believe he saw a cripple playing with a cooper's knife, and playing with it between his toes. I believe also that the neighboring gossips told him the story of the dead cow; but I am not bound to believe all they said. When such facts occur, it is so natural to run the back scent, and if memory does not furnish something invention will. I once, however, saw a man who was born without arms, but his father had killed no cow.

It is a good rule that golden rule of king Charles, to believe the half of what we hear. It is a good rule of jurisprudence to reject all hearsay evidence; and it is a good rule to reject a great deal more. A man made a fortune by wagering to the contrary of what every body said. If his maxim was true in common life how much more so in philosophy?

The attorney's case in Haddington's Poems, with the difference only between black and white, is a case in point.—He was an awkward fellow to upset his ink in his wife's lap. It was such an ill-natured return for her caresses, ingratitude of so black a dye, that he deserved his fate.

The world has been in ignorance on another subject, which this trial has promulged—First, all negroes were supposed to be black. In process of time it was discovered that some were white;—and now it appears that others are pye-balled. He that doctor Mitchill saw, in the very act of metamor-

phose, was a full-grown man, and could not be influenced, one would think at that time, by any affection of his mama to change his color. That fact then remains to be accounted for on some new principle. I once knew a Mr. Percy, a composer in music and a singing-master. He taught in my family, and he confessed one day in the fulness of his heart that he had been credulous enough to throw away a guinea a visit for several months, to a quack, calling himself an ancient magnetist, who undertook by gestures and wry faces to take a purple stain from the cheek of a favorite pupil. In the beginning of the *course of magnetism* all parents kindred and neighbours glorified this quack, for they thought they saw the mark disappearing from the edge of the lower eye-lash. But finally they were convinced that they were imposed upon.

There was a horse shown some time ago in New-York as a wonder, and he passed well enough because his tail was shaved and his buttocks painted dapple green. It is the easiest thing in life to work a wonder.

The last question I took the liberty of asking doctor Mitchill, in order to come to a just estimate of what he conceives the line of probability, was, whether the fact which we have on scripture authority of the changes worked upon Laban's sheep by the contrivance of Jacob, was to be considered as a miracle, or, on the principles of maternal affection, a thing within the ordinary laws of nature. And the learned witness answered, without hesitation, that it was to be accounted for by the ordinary laws of nature. Seeing that this is so, and that in matters of generation the resemblance is so perfect between man and beast, I wonder it has not been long ago turned to the embellishment of the human species. Ladies might go to the ball and Indians to the war without pain; and it would be an innocent pleasure to variegate boys and girls, by means of colored sticks, feathers, and ribands; and the dutchmen might display their taste upon their chil-

dren as they now do upon their tulips. How pretty and pleasant to see little natural Harlequins playing about! But for the ignorance of our fathers we might have been burnished like game cocks, and had wives like birds of Paradise, and daughters like cockatoos: now and then those that love curiosities might have a little monster, and for those who think two heads better than one, it would be quite easy to frighten the mother out of a child with two heads.

Let not the learned witness complain that we treat his opinions lightly: the greatest philosophers in the univere have been thought, upon some particular subjects, too easy of belief.

Hippocrates relates that his mother used frequently to tell him that for two years before his birth she had no carnal intercourse with his father. But that she had been strangely influenced one evening as she was walking in the garden.

Galen, in his treatise on the measles, says the disease was brought by a woman who had no father.

Doctor Harvey, who discovered the circulation of the blood, is said to have believed and written of a race of men with tails.

Diodorus Siculus mentions a sorceress of Egypt who had passed for the celebrated Isis, upon the strength of bearing children without the help of men, but that a priest of Mercury was detected in her bed.

Livy speaks of a woman brought-to-bed in a desolate Island where she had not seen a human face for nine years.—She was brought, he says, to Rome, and examined by the Senate. What a pity that we had no report taken in shorthand of the arguments of the jurisconsuls, and the opinions of the conscript fathers.

Lord Bacon, in treating of the period of gestation of various animals, says, gravely, that an ox goes twelve months with young; and doctor Mitchill of North America, was

so impressed in early life by reading the novel of the Christian bishop Heliodorus, entitled the loves of Theagines and Chariclea, that he could not see any improbability in black men getting white children.

A Prussian soldier was detected taking jewels and corporal ornaments from the image of the Virgin Mary, and boldly asserted that she gave them to him. The case was novel, and a counsel of prelates and other learned men was convened, who, not averse to miracles, adjudged the thing possible. Frederic the great, understood trap, and suffered the soldier to be discharged; but next day it was proclaimed that on pain of death, none should take advantage of the generosity of the Virgin Mary. Now let it be proclaimed by authority of the Mayor and Corporation, that no black man shall hereafter presume to get a white child; but let the fellow be in the mean time discharged.

And now that we have returned from our voyage round the world, let us look how the thing stands on a nearer view. Ten or twelve of the most experienced physicians declare this thing next to impossible. One gentleman says, emphatically, that if it is true, it is a prodigy, and that prodigies, he believes, do not happen, though perjuries do. Some of the professional witnesses have resided long in those countries where if such facts were natural they must have fallen within their notice; but they never saw one such as would warrant their belief in this case—others have practised in that particular and useful branch which enables them to judge with certainty in matters of this nature; and envy cannot deny of them that they have brought more into the world than they have sent out of it. The very gentleman who ushered into life the babe, whose name will be bright in the annals of zoology, physiology, pathology, and all the *ologies*, (doctor Secor) agrees that it is the child of a white man.—Doctor Mitchill denies it, partly on the authority of the quadrupeds of Paraguay, and partly because Miss Williams has

deposed otherwise. Allowing the analogy in such transactions between men and four-footed animals, yet I am not so easy in allowing weight to the testimony of a woman, who swears to her own shame ; and if I did give weight to her testimony, I should not admit any conclusion to be drawn from it in this case ; for it is as strong one way as the other. She scuffled with a black man in a bad house, and he worried her out and had a connexion with her. Very good.—Shortly afterwards she scuffled, or fit, as she termed it, with a white man, and knocked off his hat, but he afterwards came to bed without his hat and had a connexion with her. Did you cry out ? no, sir. What then did you do ? I bid him be quiet ! well ! where is the difference, except in this, that the white man had no hat upon his head ? Will it be contended now, on the authority of any treatise upon generation, that a man cannot get a child without a hat upon his head ? Here I might say, without indiscretion, your honors have experience to the contrary. No well bred man would think of going to bed to a lady with a hat on ; if he did, she would do well to knock it off. If he was so much afraid of catching cold, he might have put on his night cap. To be sure, if he be of the society of friends, it alters the case, because then it might be an inconvenience, but could not be considered an incivility—but there is no evidence of that.

Besides this, the evidence of alderman Barker and Mr. O'Blenis shows, that she has contradicted herself upon oath, for, before them she swore she had no connexion with a white man. Here before this court she admits, when upon oath, that she had. She admitted, it is true, before those magistrates, after her depositions were given in, that she had a scuffle with the white man, and that he tore her petticoat ; but that does not reconcile the contradiction upon oath.—Tearing a petticoat, is not having a connexion ; nor is it to be supposed that all the passions with which that white man was influenced, were to be allayed by the small satisfaction

of tearing her petticoat. Where there are Helens there will be wars; but the most quarrelsome will not fly to arms for the sake of tearing petticoats,. I defy all the annals of pathology to show a case of a man affected with such an antipathy to petticoats. But it may be said one of these scuffles was more platonic than the other. I do not believe that.—The one worried, and the other *fit*. Platonic love does not carry pistols, nor jump into bed with its hat on. Such scuffles may differ in etiquette—but not in reality. "Montague's men are always thrust from the wall, and their women to the wall." Can we believe that the white watch made the black watch turn out, merely for the sake of a warm hammock. If that be so, I can only say, "delicate pleasures to susceptible minds!" But that is not the argument; the woman herself says, that there were no young ones that time, because they *fit* all the time. If they fit, what more is wanted? One of the counsel asked whether many races of animals were not propagated in strife, and he instanced cats: but he might have taken a still nobler instance, that of the Sabine women, who scuffled with the Roman men, yet bore them children. All history, sacred and profane, is full of children begotten in violence. There are countries where a scratched nose is a sign of victory rather than defeat; and where a woman who surrenders her favors, without resistance, is like a general who surrenders a strong place without a shot. Say then that one scuffled like Boreas, the other like Zephyr—still it comes to the same thing; for Zephyr, mild as he was, got Flora with child, and Boreas with his Orythia could no more, except that he got twins with wings on them. The terms in which Ovid makes Flora give her evidence, are so applicable to the case of our Lucy, when she speaks of her black lover, that I am tempted, as well for that, as to show I have not forgot my Latin, to repeat them.

Ver erat, Zephyrus me conspexit, abibam
Insequitur, fugio, fortior ille fuit.

What is there then but the love of the marvellous that should induce us to depart from the ordinary laws of nature to come at the conclusion, that this child belongs to a black rather than to a white man? There was no difference but in the manner; and in such matters every man will have his way.

> Dick can neatly dance a jig,
> But Tom is best at Borees.

There remains but one topic of the evidence to discuss.—Cases have been related and assented to by Doctor Mitchill, that where there has been a rapid succession of intercourse between a white and a black man, twins have been born, each resembling the respective incumbent to whom he owes his origin. Upon this ground we are at length enabled to make a proposition which will meet the justice of the case, and of course the approbation of the court. It appears here that there has been a rapid succession of intercourse in the very terms of the evidence; but of the twins only one is yet come to light, which is evidently that of the white man. The black man's twin is not yet born; but if the lady be as slow in bringing forth as she was quick in conceiving, it will be time enough two years hence to look for it. Let her satisfy the court that she has lived chaste since April, 1806, and will continue so for two years more, and then if there comes a black child *bona fide* the fruit of our connexion, we pledge ourselves to maintain it.